DOCUMENT RESUME

ED 094 865 PS 007 332

AUTHOR	Reese, Clyde; Stout, Jack
TITLE	A Study of Preschool-Related Variables Which Influence the Effects of SES Mix in Child Development Programs.
INSTITUTION	State Coll. of Arkansas, Conway.
SPONS AGENCY	Office of Child Development (DHEW), Washington, D.C.
REPORT NO	OCD-CB-323
PUB DATE	22 Feb 74
NOTE	155p.
EDRS PRICE	MF-$0.75 HC-$7.80 PLUS POSTAGE
DESCRIPTORS	Child Development Centers; Classroom Integration; *Cognitive Development; *Disadvantaged Youth; Educational Environment; Parent Attitudes; Predictor Variables; *Preschool Children; *Preschool Teachers; Program Effectiveness; Rural Schools; Social Development; *Socioeconomic Influences; Teacher Attitudes; Urban Schools
IDENTIFIERS	*Socioeconomic Mix

ABSTRACT

This study was an attempt to discover practical ways in which a preschool director can institute positive change in socioeconomically mixed child development centers. Twelve socioeconomically mixed and six unmixed preschool centers in rural, urban, and inner-city areas participated in the research. Data was collected on 48 teachers, 127 parents, and 421 children. Eight objectives accompanied by detailed hypotheses were formulated to guide the investigation. Twelve measurement instruments assessed the effectiveness of preschool programs in serving both advantaged and disadvantaged children, parent attitudes toward their children and toward educational goals, teacher attitudes, and preschool environments. In general, it was concluded that socioeconomic mixing in preschool programs does enhance chances of achieving certain kinds of educational objectives, and even seems to act as a catalyst for augmenting or altering the effects of other predictor variables. Also, it was found necessary to define educational objectives before the optimum preschool environment could be prescribed. Specific study test results and conclusions are reported at length. The practical implications of these findings are that socioeconomic mixing has a positive effect on the cognitive development of disadvantaged children and that advantaged subjects realize positive gains on both the cognitive and social dimensions. Other trends are indicated by the numerous significant interaction effects. (Author/SDH)

U.S. DEPARTMENT OF HEALTH
EDUCATION & WELFARE
NATIONAL INSTITUTE OF
EDUCATION
THIS DOCUMENT HAS BEEN REPRODUCED EXACTLY AS RECEIVED FROM THE PERSON OR ORGANIZATION ORIGINATING IT. POINTS OF VIEW OR OPINIONS STATED DO NOT NECESSARILY REPRESENT OFFICIAL NATIONAL INSTITUTE OF EDUCATION POSITION OR POLICY

ED 094865

BEST COPY AVAILABLE

A STUDY OF PRESCHOOL-RELATED VARIABLES WHICH INFLUENCE THE EFFECTS OF SES MIX IN CHILD DEVELOPMENT PROGRAMS

Clyde Reese, Ed.D.

Jack Stout, Systems Analyst

PS 007332

Supported by O.E.O. Contract Number OCD-CB-323

State College of Arkansas

ABSTRACT

In 1971-72, the first phase of this research effort was completed. The major conclusions drawn from that phase were:

1. Socioeconomic mix has a positive effect upon the cognitive development of disadvantaged children, with less positive effects on verbal skills than other areas of cognitive development.
2. As the level of socioeconomic mix increases there is an increase in interactions between the subject and adults and a decrease in interactions between the subject and peers.
3. Conversely, as the level of socioeconomic mix decreases there is a decrease in interactions between subjects and adults and an increase in interactions between subject and peers.
4. Socioeconomic mix had a positive effect on the social competency of disadvantaged children, i.e., interactions with adults under problem and stress situations.
5. Socioeconomic mix has a positive effect in the development of social directed behavior and less ego directed behavior.
6. Data were inconclusive to give support to a preferred level of socioeconomic mix as being superior.

In 1972-73, Phase II research was completed. The major conclusions drawn from this second phase were:

1. The positive effects of socioeconomic mix on the cognitive development of disadvantaged children were sustained over a two-year period.
2. Increases in interactions between subjects and adults occur as the level of socioeconomic mix increases, and initially there are decreases in interactions between subjects and peers. However, over a prolonged period (two years) interactions between subjects and peers increase.
3. Interactions between subjects and adults decrease as the level of socioeconomic mix decreases. As the level of socioeconomic mix decreases there is an increase in interaction between subjects and peers.
4. Disadvantaged children functioning in classes of socioeconomic mix showed greater competency in interacting with adults under problem and stress situations.
5. The data did not support any preferred level of socioeconomic mix if the minimum was a 75-25 disadvantaged-advantaged ratio.
6. Those advantaged subjects who participated in the second year of the study realized positive gains on both the cognitive and social dimensions.

Guided by the knowledge gained in Phases I and II, Phase III was designed to identify conditions which allow for optimum utilization of the educational opportunities made available by the existence of socioeconomic heterogeneity in preschool programs, and to identify conditions which allow for the amelioration or elimination of any disadvantages which might be attributed to the existence of SES heterogeneity in preschool programs. In other words, Phase III was an attempt to discover practical ways in which a preschool manager can institute positive change in the socioeconomically mixed Child Development centers.

The "effectiveness" of preschool programs in serving both advantaged and disadvantaged children was assessed by means of five instruments:

1. Kansas Social Interaction Observation Procedure
2. Peabody Picture Vocabulary Test
3. Test of Basic Experience
4. Test of General Abilities (Concept Conservation Test)
5. Cincinnati Autonomy Test Battery

Parent attitudes toward their children and toward educational goals were assessed by means of the McInnis and Johnson Semantic Differential Scale and the Parent Q-Sort, a forced sort of educational goals.

Teacher attitudes were assessed via the Walker Inventory of Beliefs and the California F Scale.

Preschool environments were analyzed by use of the Stout Environmental Opportunities Scale, the Zahorik Verbal Feedback Scale, and the Center Q-Sort (the same forced sort of educational goals used with parents).

Eighteen preschool environments were included in this study, 12 socioeconomically mixed and six socioeconomically unmixed. Seven centers were in rural areas, three in urban areas, and eight in inner-city areas. Data was collected on 48 teachers, 127 parents, and 421 children.

The major conclusions drawn from Phase III research were:

1. Conclusions drawn from Phase I and Phase II research were supported. In general, a socioeconomically mixed preschool is likely to produce larger gains in cognitive and social development than an unmixed preschool.
2. Certain teacher verbal feedback patterns (Zahorik Scale) and center type differences (Stout Scale) produced different results in mixed centers than in unmixed centers. This may mean that a style of verbal feedback appropriate in an unmixed center may not be appropriate in a mixed center and vice versa. The same appears to be true of center type. This finding indicates the existence of a substantial opportunity for developing precisely focused in-service training and staff development programs. For both mixed and unmixed centers, the

Peabody Picture Vocabulary Test and the Test of General Abilities, which are essentially intelligence-achievement measures, were influenced by a combination of teacher verbal feedback patterns and the center type as measured by the Stout Scale. Various combinations of Stout and Zahorik Sub-Scales appeared to account for about 10 per cent of the variance in pupil performance on the PPVT and on the Test of General Abilities.

3. Teacher verbal feedback patterns were significantly influenced ($p > .05$) by the existence or absence of socioeconomic mixing in the classroom. Teachers in mixed centers employed more amplified positive verbal feedback than did teachers in unmixed centers. This shift in teacher behavior may help to explain the increase in subject-adult interaction in mixed centers found in Phase I and Phase II research. This may also give a clue as to why a particular pattern of teacher verbal feedback may produce different results in a mixed center than in an unmixed center.

4. On four sub-scales of the Cincinnati Autonomy Test Battery, teacher attitude, as measured by the Walker Inventory of Beliefs and the California F Scale, accounted for approximately 25 percent of the variance in pupil performance. Those four

sub-scales were Fantasy Verbalization (4), Impulse Control (5), Task Competence (12), and Social Competence (13). Other combinations of the Walker Inventory of Belief and the California F Scale accounted for approximately 16 percent of the variance in pupil performance on the Test of General Abilities. Since there was very little interaction effect between teacher attitude measurement and teacher verbal feedback patterns, it would seem that the substantial impact of teacher attitude upon pupil performance must be the result of -- not <u>how</u> teachers reinforce -- but <u>what</u> teachers reinforce. The impact of teacher goal orientation upon pupil performance further supports this hypothesis.

5. The educational goals chosen by each center had an extremely strong influence on pupil performance, especially on the Peabody Picture Vocabulary Test where over 90 percent of the variance in pupil performance was accounted for by the centers' goal orientations.

6. For mixed and unmixed centers, parents' choice of educational goals had a significant influence on pupil performance as measured by the Peabody Picture Vocabulary Test and the Test of General Abilities. <u>However, it is very interesting to note that the parental goal choices which seemed</u>

to have the greatest effect on pupil performance differed from mixed to unmixed centers. This finding may indicate that the parental attitudes toward educational goals which would be most helpful in an unmixed center may not be the same as those which would be most helpful in a mixed center. Put another way, the mixed center may be better able to enhance the effects of certain parental goal orientations than an unmixed center. This finding has implications for the design of parent involvement programs.

7. The discrepancy between parental goal orientation and center goal orientation accounted for a significant amount of variance in pupil performance on the Peabody Picture Vocabulary Test and on Sub-Test number II (Resistance to Distraction) of the Cincinnati Autonomy Test Battery.

8. From a purely practical point of view, it appears that the most reliable combination of predictor variables would consist of:

   a) whether the center is socioeconomically mixed or unmixed;

   b) the center's structural type (Stout Scale);

   c) teacher verbal feedback patterns (Zahorik Scale);

   d) teacher attitude, particularly as measured by the F Scale and the Inventory of Beliefs; and

e) teacher goal orientation.

Depending upon educational objectives, the optimum combination of these variables could, with the aid of additional well-planned research, be described and the results used by preschool management to institute deliberate change in the preschool organization and program.

Conclusion

Socioeconomic mixing in preschool programs does, in general, enhance chances of achieving certain kinds of educational objectives, and even seems to act as a catalyst for augmenting or altering the effects of other predictor variables.

Perhaps the most important conclusion to be drawn from this research is the realization that educational purposes (values and objectives) must be known before the optimum preschool structure, organization, program, staffing patterns, in-service training, parent involvement, grouping patterns, or even socioeconomic makeup can be prescribed. Given the findings from this Phase III research, it is exciting to speculate upon (predict) the gains in measured program effectiveness that might well be achieved by an unprecedented combination of controllable predictor variables -- variables which even in relatively low magnitudes and in uncontrolled combinations proved to have significant positive impact upon

various aspects of cognitive and social learning. Socio-economic mix is certainly one of those key variables.

ACKNOWLEDGEMENTS

For the understanding, helpfulness, and cooperation of all those who made this study possible, the authors extend their sincere appreciation. To the supervisory personnel of the Arkansas River Valley Area Council, Model Cities Program, and the Council of Economic Opportunity, their staff, and the families of the children enrolled in the Centers, the authors express a special note of thanks.

The authors also wish to acknowledge the aid and support of the staff members of the Office of Child Development for their efforts in obtaining the permission necessary for setting up the experimental conditions of the study. Without the dedicated efforts of those identified, such a study would not have been possible.

Last, but certainly not least, the authors are grateful for the support given by the officials of State College of Arkansas. It should be recognized, however, that the materials contained in the report and any errors or shortcomings are the sole responsibility of the authors.

Clyde Reese

Jack Stout

February 22, 1974

TABLE OF CONTENTS

	Page
Chapter I	i
Introduction	1
Background and Rationale	1
Research Objectives	15
Chapter II	19
Research Design and Procedures	19
Procedures	19
Instruments	20
Data and Statistical Procedure	36
Chapter III	40
Introduction	40
Objective One	40
Objective Two	44
Objective Three	51
Objective Four	57
Objective Five	62
Objective Six	65
Objective Seven	66
Conclusions and Implications	72

LIST OF TABLES

Table No.	Title	Page No.
I	Centers By Type, Socioeconomic Mix, and Number of Subjects Included in the Study	35
II	Results of MANOVA Using Center Type and Center Location as Classification Variables and the Stout and Zahorik Sub-scales as Criterion Variables	42
III	Results of MANOVA Using Center Type and Center Location as Classification Variables and the Stout and Zahorik Total Scores as Criterion Variables	43
IV	Results of One-Way MANOVA Using Walker Inventory of Belief Sub-scales and the California F-Scale as Criteria and Center Type as the Classification Variable	47
V	Results of One-Way MANOVA Using Center Q-Sort Categories as Criteria and Center Type as the Classification Variable	48
VI	Results From SES Mixed Centers of Product-Moment Correlations for Staff Attitudes and Classroom Process Variables	49
VII	Results From SES Unmixed Centers of Produce-Moment Correlations for Staff Attitudes and Classroom Process Variables	50
VIII	Results of Multiple Regression Analysis for SES Mixed Centers Using Stout and Zahorik Sub-scales as Predictor Variables and the Peabody Picture Vocabulary Test, Test of General Abilities and the Cincinnati Autonomy Test Battery Sub-scales as Criterion Variables	53

Table No.	Title	Page No.
IX	Results of Multiple Regression Analysis for SES Unmixed Centers Using Stour and Zahorik Sub-scales as Predictor Variables and the Peabody Picture Vocabulary Test, Test of General Abilities and the Cincinnati Autonomy Test Battery Sub-scales as Criterion Variables	54
X	Results of Multiple Regression Analysis for SES Mixed Centers Using the Walker Inventory of Beliefs Subtests and the California F-Scale as Predictor Variables and the Peabody Picture Vocabulary Test, Test of General Abilities, and the Cincinnati Autonomy Test Battery Sub-scales as Criterion Variables	59
XI	Results of One-Way MANOVA Using Parent Q-Sort and the Medinnis-Johnson Semantic Differential as Criterion Variables and Center Type as the Classification Variable	64
XII	Results of Multiple Regression Analysis Using Stout Sub-scales as Predictor Variables and the Peabody Picture Vocabulary Test, Test of General Abilities, and Cincinnati Autonomy Test Battery Sub-scales as Criterion Variables	68

CHAPTER I

INTRODUCTION

Background and Rationale

Processes within the preschool or school setting may be examined in two different ways in relation to SES mix. First, there are questions which ask how classroom processes are affected by SES mixing. Second, there are questions which ask how the effects of SES mixing are influenced by classroom processes. Both issues must be considered in the design of any research effort addressing SES heterogeneity in programs for young children. Maintaining a clear distinction between the two types of questions is particularly important when assessing the applicability of findings from research of other types of heterogeneity.

After studying effects of I.Q. heterogeneity and discovering significant regression among higher I.Q. subjects (higher than could be accounted for via statistical regression toward the mean), Vane and Davis (1971) declared that schools must learn to greatly extend the range of intellect they are able to serve without resorting to ability grouping. The Vane-Davis findings suggest that the same prescription would probably apply to SES heterogeneity since there exists a consistently positive correlation between SES factors and measured I.Q. levels. And even if no such correlation existed,

variations within SES groups quite obviously exceed any variations between SES groups, all of which still leaves researchers with I.Q. mixing as an important consideration in programs incorporating SES heterogeneity.

Further complicating the issue are Schrank's two studies (1968, 1970) which investigated the mechanics of the so-called "labeling effect" (experimental bias) in classroom situations. Schrank's evidence was convincing that it is the teacher's perception that is the dominant factor in the labeling effect, and not the pupil's perception. If Schrank's work is to be taken seriously, then not only must experimental bias be considered important in SES mixing, but the specific changes in a teacher's classroom behavior as a result of his perceptions must be examined if we are to do more with SES heterogeneity than merely observe its effects.

Any notions that SES mix effects may be controlled largely by some sort of simplistic "rubbing off" process may be safely abandoned. Schrank's evidence helped to focus this research design upon teacher behavior. But Carnine's investigations (1968) were even more persuasive in that direction. While Bandura (1966) did document an effect he called "vicarious reinforcement" between children in a laboratory setting, Carnine showed that the effect in a classroom situation is practically insignificant and that, in fact, there may be no such behavioral mechanism as "vicarious reinforcement." Instead, the reinforcement of higher SES children in the

presence of lower SES children seems only to serve as a discriminative stimulus (and that a weak one). And, unless the resultant behavior (or an approximation) on the part of the lower SES child is immediately perceived and reinforced, long-term influence will be minimal. Carnine's work with SES heterogeneity, therefore, hints that preschool staff members might derive more impressive gains under heterogeneous conditions if they have been specifically trained to recognize and reinforce these subtle and otherwise ephemeral behavioral changes. These considerations furnished a basis for this research to analyze effects upon, as well as effects of, patterns of teacher verbal feedback.

Brozovich (1970) eliminated the last vestiges of simplistic hypotheses when he discovered a higher correlation between popularity criteria and characteristics suitable to classroom success among lower SES children than among higher SES children. Many educators have supposed for years that schools serve middleclass children better than lower-class children, at least partly because patterns of peer reinforcement among lower-class children were thought to be less appropriate to classroom success. Brozovich's work indicates that the popular hypothesis may well be pure fantasy.

While several studies have linked variations in observed teacher behavior to success in dealing with different kinds of children, i.e., different ability levels, different SES backgrounds (Zahorik, 1970; Eva Baker, 1969), others have

linked differences in teachers' attitudinal patterns to success in dealing with children from different kinds of backgrounds. (McInnis and Johnson, 1970; Brody, 1970; Scarr, 1970, etc.) Thus, this research design dealt with teacher attitude as well as behavior.

But it may not be enough to examine teacher behavior and attitude without also examining the classroom circumstances upon which a teacher's behavior may be contingent. Beyer and Oetting (1968) were able to document an inverse correlation between a teacher's expressions of encouragement and reassurance, and student's progress in remedial English. Therefore, these researchers chose to take a closer look at reinforcement patterns in mixed and unmixed settings.

It is possible and even likely that the level of creativity inherent in a preschool environment can influence that preschool's success in incorporating SES heterogeneity. Walker (1969) discovered that teachers in highly creative school environments tend to be less stereopathic but not less rational than teachers in more traditional schools. To attempt to understand the relationships of staff attitude and behavior to success in incorporating SES heterogeneity in preschool settings, staff stereopathy, and its apparent influence upon the school environment, was examined.

Zahorik (1969) found that teachers' verbal behavior is highly dependent upon the size of the group with which the teacher is working. Zahorik examined: 1) total verbal

behavior and pauses; 2) teacher verbal behavior and pupil verbal behavior; 3) thought levels required by the teacher solicitations; and 4) logical operations required by the teacher solicitations. This research examines the grouping patterns used in preschool programs of different types and the influence of these patterns upon teacher verbal behavior.

Reese and Morrow (1971) found correlations, some significant and some approaching significance, between scores of preschool children on the Cincinnati Autonomy Test Battery and SES mix ratios in preschool settings. But if we are to understand why these correlations exist, and therefore learn to get even more benefit from SES heterogeneity, then it seems clear that teacher attitude and behavior, program type, as well as other classroom processes should be examined in conjunction with SES heterogeneity and with assessments of program "output."

Even demographic considerations take on unexpected complexities when examined in connection with socioeconomic status and educational attitudes. Urich (1969) found that attitudes of Iowa teachers fell into two type categories which he named "Localities" and "Metropolites." "Localities" were generally from rural and urban districts, while "Metropolites" were from central city districts. Urich's findings prompted these researchers to use a demographic classification of research sites which identify urban, rural, and central city sites.

While parent job description did prove useful in some ways as a predictor variable, the question of whether or not the mother is employed outside the home was thought not be be an important consideration since Nelson (1969) found that, when measured I.Q. was held constant, there was no significant difference in school achievement among children whose mothers worked full time, part time, or not at all.

Wolfe (1964) discovered high correlations between the intellectual development of children and the following five variables: 1) the parents' intellectual expectations for the child; 2) the amount of information that the mother had about the child's intellectual development; 3) the opportunities provided for enlarging the child's vocabulary; 4) the extent to which the parents created situations for learning in the home; and 5) the extent of assistance given in learning situations related to school and non-school activities.

Just how causal these correlational relationships are may be open to question. But it can hardly be argued that there are no causal relationships operating in Wolfe's research findings. Winer, Rider, and Oppel (1963) concluded that environmental conditions in the home were responsible for an actual decline in the intelligence scores of lower SES children. This conclusion led the researchers to propose their "cumulative deficit" hypothesis.

Whether or not Wolfe's five variables are the key ingredients in the environmental conditions discussed by Winer, Rider, and Oppel, a safe assumption is that a preschool constituency mixed on the basis of socioeconomic status is also mixed on the basis of types of parenting practices.

Heber (1966) found that only children of mothers with I.Q.'s less than 80 show a progressive decline in mean intelligence scores as they grow older. It seems obvious that parental intelligence and parental attitudes do not directly influence a child's development for, unless parental intelligence and attitude are manifested in the behavior of the parent(s), those factors can hardly influence the life of a child. (Unless, of course, the correction is purely genetic, in which case the research problem must be medical.) Heber's team of researchers observed that retarded mothers tended to create a social environment in their homes that is distinctly different from that created by mothers of normal intelligence.

Heber's research was done in economically disadvantaged neighborhoods. One of Heber's conclusions was that unusually high concentrations of mental retardation in economically disadvantaged areas are not caused by environment of the area in general but by the social environments created in the homes of retarded mothers living in the disadvantaged areas.

Therefore, if it is hoped that SES mixing in preschool programs will somehow improve the parenting practices of lower SES parents, research must be directed at discovering which

parenting practices are critical and what procedures can be relied upon to effect the appropriate changes in parent behavior. This research focused upon parental attitudes and goal orientations as a prelude to analysis of parent behavior.

Frost (1964) found that disadvantaged children enrolled in schools composed of primarily advantaged children had higher academic achievement than similarly disadvantaged children enrolled in classrooms primarily comprised of disadvantaged children. Reese and Morrow (1971) discovered that SES mixing in preschool settings does alter both classroom processes (patterns of social interaction, for example) as well as altering program output as determined by several standard assessments of children's performances. These findings indicated that SES mix factors influence the lives of children in preschool settings significantly enough to warrant further investigation. But, more importantly, the findings also indicated that without some understanding of the processes responsible for this significant influence outcomes may occur in such complex disarray as to make reliable utilization of SES mixing impossible.

The whole business of who is modeling what for whom has been dragged out of the depths of conjecture by an important study done by Kunz and Moyer (1967). The researchers tested 16 hypotheses about differences between economically advantaged children and economically disadvantaged children of preschool age. Their criteria for defining "advantaged" and

"disadvantaged" were as clear cut as those used in any related study known to these authors. The lower SES group came from homes with an annual income below the index of poverty established by the U.S. Office of Economic Opportunity in 1965. The higher SES group came from homes where family income was in excess of $10,000.

Kunz and Moyer found no significant differences related to socioeconomic status in areas of physical skills, preference for immediate or delayed reward, or attempts at problem solving.

The area of language skills was more complex and seemed to have ethnocentric implications. In assessing naming and defining abilities, there was no significant difference when the vocabulary list was composed of words from the environment of the disadvantaged children along with objects and colored pictures. But, when random selections from the Gates Word List were used, significant differences were detected in favor of the advantaged group. And, even when the vocabulary list composed of words taken from the environment of the disadvantaged children was used with black and white pictures, significant differences in favor of the advantaged children were found. Apparently, there are differences in visual discrimination abilities in favor of the advantaged children. This, together with the bias found in most vocabulary lists, may account for apparent differences in naming and defining skills.

No differences in length of sentences spoken were found. (Reese and Morrow also found no significant differences in

length of sentences spoken.)

Significant differences were discovered between the advantaged and disadvantaged groups in the area of eye-hand motor skills. The researchers postulated that this evidence indicated that disadvantaged children are apt to lack experience with manipulative materials. This may also help to explain the differences in visual discrimination ability which complicated the interpretation of results of testing naming and defining skills.

All of this raises serious questions as to what behaviors are likely to be modeled by higher SES children in socioeconomically heterogeneous conditions. Our intuitive expectations may well be worthless at best, or even dangerous. And if so-called "vicarious reinforcement" actually operates only as a weak discriminative stimulus, as has been suggested earlier in this report, then in order to know what types of behavior we can expect to reinforce and shape in the disadvantaged children, we must first have some reasonably accurate ideas about what kinds of behaviors we can expect higher SES children to model. However, an analysis of such behavioral patterns in very young children was felt to be a major research effort in itself and was not included in this design.

Basic to this research design was the premise that socioeconomic heterogeneity in programs for children is worthy of consideration not only as a means of better achieving some other goal, such as the improvement of verbal skills, but is

itself worthy of goal status as well. The logic behind this premise is as follows:

A pluralistic society must, in order to be a society, compose itself of people who not only value diversity, but who also find themselves in regular contact with people whose differences qualify the pluralism. For, unless participants in a pluralistic society mingle on many levels of social intercourse, there is no society but, instead, there exists only a number of separate societies connected by political, geographical, and economic patterns. To qualify as a pluralistic society, diverse peoples must mix. And, as children are people, their mixing is as much an index of success in pluralism as would be the mixing of their parents.

It is not, however, to be assumed that SES mixing in programs for young children can be accomplished without careful consideration of the influence of that goal's attainment upon the attainment of other, perhaps equally important, goals. And, whether or not future legislative policy regarding expenditures of funds for day care services includes references to SES mix, the fact is that SES mixing exists today, policy or no policy, in many centers. If there are ways of taking advantage of opportunities made available by the existence of SES heterogeneity in preschool programs, then those methods should be documented and disseminated. And should SES mixing prove detrimental in any way for any child, then methods of ameliorating those effects must be

developed and implemented.

Certainly research must justify any future funding policy decisions related to SES heterogeneity in preschool settings. Moreover, the omission of SES mix policy in future legislation must be justified by exactly the same research procedures as would be necessary to justify the inclusion of any such policy. This is especially true since the effects of no policy are just as researchable as would be the effects of any given policy.

Research design ought, therefore, to ask the kinds of questions whose answers are most apt to prove practically useful in program and policy development. For example, it might be interesting to research the question of whether some system for determining SES classification could be developed incorporating results of individually administered I.Q. tests of parents, along with considerations of family income. It is possible that using such a system we might regulate SES mix more effectively, thereby achieving even greater positive results from SES heterogeneity.

But, even if this type of research effort were carried out successfully, the chances are slim that the results would be of any widespread practical use, since it is hardly likely that we can ever administer individual (or even group, for that matter) I.Q. tests to every parent of a preschool age child involved in a federally supported program.

In contract, a research effort aimed at developing a system of SES classification incorporating job descriptions along with family income could well prove to be of practical value. Interesting though the first type of research effort might be, it is the latter effort that must be considered a higher research priority. Where research funds are not infinite, the likelihood of practical program and policy application must be considered in assessing priorities.

Keeping in mind this consideration of practicality, the research problem must then be considered in light of its actual complexity. The question, "What are the effects of SES heterogeneity in preschool settings?", was expanded to include a variety of contingencies, many of which may occur in combination. Therefore, the questions asked were, what are the effects of SES heterogeneity in preschool settings . . . in inner-city areas? in suburban areas? in rural areas? in the context of what program type? in the context of what types of staff behaviors? parental attitudes? staff attitudes? administrator attitudes?, etc.?

A review of related research and an analysis of Office of Child Development SES mix priorities, together with the Summary of the Conference on Socioeconomic Mix, indicated a consensus of opinion that 1) there <u>are</u> effects that can be accounted for by the SES mix ratios in school settings; 2) not all of these effects are necessarily beneficial; and 3) these effects are likely to be highly contingent upon

other variables, many of which are manipulatable.

The effects of SES mixing seem so highly contingent upon other variables, such as program type, staff behavior, etc., that research, if it is to be productive, must be aimed at analyzing the processes whereby these effects are achieved. Without controlling for program type, demographic factors, and staff behavior, for example, there will be little that can be said about the effects of SES mixing in preschool or school settings. And even statistically significant results will, in most cases, not hold true under all programmatic conditions, nor in the context of all types of staff behavior, attitude, training, etc.

If research in this area is to be of any practical use in the near future, documented effects must either hold true under most programmatic conditions or it must be known with some precision the conditions under which these effects will hold true.

The problem is one of discovering, and later creating, conditions in which SES heterogeneity, however, defined, can be incorporated with optimum results. Having rendered obsolete any notion that SES mixing can achieve substantially beneficial results, while not achieving substantially harmful results, in all types of programs and in the context of all patterns of staff behavior, the results of previous research efforts now seem to justify the following conclusion:

If SES heterogeneity is to be employed in programs for young children, then it must be learned HOW to use SES heterogeneity in such programs to better achieve program objectives. The purpose of Phase III research was to make progress toward development of such knowledge.

Research Objectives

As mentioned in the preceeding section, the purpose of this study was to identify conditions (preschool and related) which can be practically manipulated by preschool management to achieve optimum utilization of educational opportunities made available by the existence of socioeconomic heterogeneity in preschool programs, and to identify conditions which allow for the amelioration or elimination of any disadvantages which might be attributed to the existence of SES heterogeneity in preschool programs.

For each of the following research "objectives", several hypotheses were written and tested. These hypotheses and the specific research outcomes related to them are discussed in Chapter III, Results and Conclusions.

Objective 1: To assess the influence of socioeconomic mixing in preschool programs on a number of specified classroom processes which have been found to correlate with one or more indicators of program effectiveness. (Classroom processes in mixed and unmixed rural, urban, and inner-city preschool settings were

measured using the Kansas Social Interaction Observation Procedure, a modified Zahorik Teacher Verbal Feedback Scale, and the Stout Environmental Opportunities Scale.)

Objective 2: To assess the influence of socioeconomic mixing in preschool programs upon staff attitudes, and to examine relationships of those attitudes to key aspects of classroom processes. (Staff attitudes in mixed and unmixed rural, urban, and inner-city preschool programs were assessed using the Walker Inventory of Beliefs, Medinnis and Johnson Semantic Differential Scale, California F Scale, and the Quality Education Program Study Title III forced sort of educational goals. Classroom processes were measured as described under Objective 1.)

Objective 3: To assess the influence of several specified classroom processes upon program effectiveness in socioeconomically mixed and unmixed preschool programs. (Program effectiveness was measured using the Tests of General Ability, American Series, Peabody Picture Vocabulary Test, Cincinnati Autonomy Test Battery, Kansas Social Interaction Observation Procedure, and the Concept Conservation Test. Classroom processes were assessed as in Objective 1.)

Objective 4: To assess relationships of staff attitude to program effectiveness in socioeconomically mixed

and unmixed preschool programs. (Staff attitude was assessed as described under Objective 2, and program effectiveness was assessed as described under Objective 3.)

Objective 5: To assess the influence of socioeconomic mixing in preschool programs upon parental attitudes and to examine relationships of those attitudes to program effectiveness in socioeconomically mixed and unmixed preschool programs. (Parent attitudes were assessed using the Medinnis and Johnson Semantic Differential Scale and the forced sort of educational goals. Program effectiveness was measured as described under Objective 3.)

Objective 6: To gather data for the development of a system of classifying preschool children according to socioeconomic status. This classification system may include information such as parent job description, parent educational level, age and sex of siblings, whether the child is from a one or two parent family, whether the preschool setting is urban, rural, or inner-city, and family income.

Objective 7: To develop a rating scale for classifying preschools according to the program type. This program type classification system must, in order to be considered successful, be predictive of program effectiveness in preschool programs incorporating

socioeconomic heterogeneity. (This objective was aimed at refinement of the Stout Environmental Opportunities Scale, a scale designed to objectively distinguish between more traditional "closed" centers and theoretically more innovative "open" centers.)

Objective 8: To determine whether group mixture (mixed versus unmixed) and community (rural, urban, and inner-city) influence, independently, interrelatedly, or not at all, program effectiveness in preschool centers.

CHAPTER II

RESEARCH DESIGN AND PROCEDURES

Procedures

Of the 18 preschool centers which participated in this research effort, seven were in rural settings, three in urban settings, and eight in inner-city settings. Of the rural centers, four were socioeconomically mixed and three were unmixed. Of the urban centers, two were mixed and one was unmixed. And of the inner-city centers, six were mixed and two were unmixed. No attempt was made to alter preschool processes in any center except for the creation of socioeconomic mix. Children in all 18 centers were pre- and post-tested (approximately seven month interval) on all measurement devices used to indicate program effectiveness. All 18 centers were assessed by the use of the center type and verbal feedback scales. Teacher attitudes in all centers were assessed with the same battery of measurement devices. Parent attitude and goal orientation was assessed by means of two of the same devices employed to assess teacher attitudes and center goal orientation.

By reaggregating the resulting data in numerous combinations, all objectives (and hypotheses) were tested. In this manner, a relatively modest amount of carefully

selected data was used to answer a comparatively large number of high priority research questions, while still retaining fairly large "N's."

It is important to note that the researchers did not manipulate teacher placement, child placement (other than SES mix), or classroom processes. Therefore, the differences among these particular variables in the test situation were never particularly large. For example, the possible range of the Stout Environmental Opportunities Scale is from ten to 50. But since no attempt was made to alter classroom processes, the range of scores on this scale among the 18 research sites was from 10 to 50.

Presumably, the predictive reliability of the Stout Scale would be greater if centers scoring much higher on the Stout Scale were included in the research design. Similarly, the effect of teacher attitudes, teacher verbal feedback patterns, and teacher goal orientations might well be magnified by deliberately controlling teacher placement to achieve a wider range of predictor variables.

Even so, the numerous significant interaction effects documented by this research indicate that we are on the right track to discovering practical means of improving preschool effectiveness in both mixed and unmixed preschool settings.

Instruments

Stout Environmental Opportunities Scale: This rating scale was designed to provide an objective means for

distinguishing on a continuum basis between preschool and elementary school settings which are more traditional or "closed" in their structure and organization, and those which are more innovative or "open" in their structure and organization.

The Stout Scale has three sub-scales. The first sub-scale is the "Child-Adult Interaction Opportunity Sub-Scale" which assesses the opportunities regularly and realistically available for a child to interact in a variety of ways with a variety of adults. The possible score on this sub-scale ranges from 5 through 19.

The second sub-scale is "Adult Modeling." This sub-scale assesses the opportunities for a child to observe adult-to-adult interaction on a regular basis. Possible scores on this sub-scale range from 1 through 3.

The third sub-scale is "Child-to-Group." This sub-scale assesses the opportunities regularly and realistically available to any given child for interacting in a wide variety of ways with other children of various age groups, in different activities, of different ability levels, and varying group sizes. In other words, this sub-scale assesses opportunities for the development of social skills under varying conditions. The possible scores on this sub-scale range from 4 through 28.

In general, a center scoring low is highly traditional, rigid, relatively inflexible in its organization and

structure, and provides limited opportunity for children to interact in a variety of ways, with a variety of people, under a variety of group situations, and in a variety of role capacities; while a center scoring high on the Stout Scale is more structurally and organizationally fluid, more flexible, and provides greater opportunity for a given child to interact in a variety of role situations, group sizes, activity situations, ability groupings, age groupings, and to establish stronger relationships with more adults, as well as to observe adults interacting with each other as behavioral models.

It is possible that a center may be architecturally "open", and may still score low on the Stout Scale. The degree of "openness" measured by the Stout Scale is not taken from the point of view of the architect, the parent, the teacher, or the administrator, but instead is assessed from the point of view of the child. The rating process is completely objective.

Kansas Social Interaction Observation Procedure: The Kansas Social Interaction Observation Procedure was included as one of the instruments in this study for the purpose of measuring socialization. The instrument was originally designed to measure social interaction on 109 variables, however, 30 variables were chosen for data collection and analysis in this study.

The basic purpose of the instrument is to provide a measure of the frequency of verbal and non-verbal interactions between two or more persons during the subject's free play periods and under normal activities within the classroom setting. The measures are related to verbal and non-verbal initiations and responses of the subject and by others, and verbal and non-verbal responses not responded to by the subject and by others within the classroom environment.

The thirty variables on which data were collected and analyzed for this study are identified and briefly described below:

1. Σ Verbal Interactions S and A: The frequency of verbal interactions between the observed child and an adult.

2. Σ Verbal Interactions S and P: The frequency of verbal interactions between the observed child and a peer.

3. Σ Nonverbal Interactions S and A: The frequency of nonverbal interactions between the observed child and an adult.

4. Σ Nonverbal Interactions S and P: The frequency of non-verbal interactions between the observed child and a peer.

5. Σ Verbal-Nonverbal Interactions S and A: The frequency of interactions containing <u>both</u> verbal and nonverbal cues between the observed child and an adult.

6. Σ Verbal-Nonverbal Interactions S and P. The frequency of interactions containing <u>both</u> verbal and nonverbal cues between the observed child and a peer.

7. Total Verbal Interactions: The frequency of all verbal interactions between the observed child and another person.

8. Total Nonverbal Interactions: The frequency of nonverbal interactions between an observed child and another person.

9. Total Verbal-Nonverbal Interactions: The frequency of interactions containing both verbal and nonverbal cues between an observed child and another person.

10. Σ S and A Interactions: The frequency of social interactions between an observed child and an adult.

11. Σ S and P Interactions: The frequency of social interactions between an observed child and a peer.

12. Total Verbal Initiations by S: The frequency of verbal initiations made by the observed child.

13. Total Nonverbal Initiations by S: The frequency of nonverbal initiations made by the observed child.

14. Total Verbal Responses by S: The frequency of verbal responses made by the observed child.

15. Total Nonverbal Responses by S: The frequency of nonverbal responses made by the observed child.

16. S to A Initiations Responded to: The frequency of initiations made by the observed child to an adult that is responded to by the adult.

17. S to P Initiations Responded to: The frequency of initiations made by the observed child to a peer that are responded to by the peer.

18. A to S Initiations Responded to: The frequency of initiations made by an adult to the observed child that are responded to by the child.

19. P to S Initiations Responded to: The frequency of initiations made by a peer to the observed child that are responded to by the child.

20. Total Initiations Responded to: The frequency of initiations made either to or by the observed child that are responded to.

21. S to A Initiations Not Responded to: The frequency of initiations made by the observed child to an adult that are not responded to by the adult.

22. S to P Initiations Not Responded to: The frequency of initiations made by the observed child to a peer that are not responded to by the peer.

23. A to S Initiations Not Responded to: The frequency of initiations made by an adult to the observed child that are not responded to by the child.

24. P to S Initiations Not Responded to: The frequency of initiations made by a peer to the observed child that are not responded to by the child.

25. Total Initiations Not Responded to: The frequency of initiations made either to or by the observed child that are not responded to.

26. Total S to A Interactions: The frequency of interactions with the observed child initiating to an adult.

27. Total S to P Interactions: The frequency of interactions with the observed child initiating to a peer.

28. Total A to S Interactions: The frequency of interactions with an adult initiating to the observed child.

29. Total P to S Interactions: The frequency of interactions with a peer initiating to the observed child.

30. Total Interactions S to G: The frequency of interactions of the observed child with a group.

Peabody Picture Vocabulary Test: The Peabody Picture Vocabulary Test is designed to provide a measure of a subject's verbal intelligence through measuring his hearing vocabulary. The instrument may be used on subjects ranging from two years and six months to eighteen years of age. A discussion of the norms, validity, and reliability of the

test is contained in the test manual. The instrument was included in this study because of its emphasis on hearing vocabulary and for comparisons with the Pre-School Inventory which was designed primarily for the disadvantaged.

Test of Basic Experience, General Concept: The Test of Basic Experiences, General Concepts, is designed primarily as a cognitive measure "to provide an increased understanding of the child and the class by providing an indication of how well a child's experiences have prepared him for his introduction to many of the scholastic activities that he will encounter." The instrument is published by CTB/McGraw-Hill. Five tests are available, the General Concepts Test, Mathematics Test, Language Test, Science Test, and Social Studies Test. Inasmuch as the General Concepts Test covers all the four subject matter areas and is particularly useful in a pre-school setting without a formal academic structure, the General Concepts Test was chosen for use in this study. A discussion of the technical data related to the construction of the instrument is covered in the test manual.

Tests of General Ability, Preschool Level: This test is presented by the authors as a general measure of readiness for primary schooling; it attempts to measure readiness by sampling from four areas: Oral Vocabulary, Number, Association, and Classification. These are combined to produce a Verbal-Numerical score and a Nonverbal score, the latter by combining the Association and Classification scores. Finally,

an overall Total score is found by adding the Verbal and Nonverbal scores.

The authors feel that "the abilities which are measured by the Preschool Test are related to success in school work. In general, the children who have a good vocabulary and do well in other parts of the test have greater promise of success in school work than those who do not." The test was selected, also, because of the manner of testing: since testing is accomplished on two days, the newness of the test situation is obviated and the subject can use his abilities to answer accurately.

Cincinnati Autonomy Test Battery: The Cincinnati Autonomy Test Battery was included as one of the measures in this study because it addresses itself to the various aspects of cognitive and social behaviors not included in the more conventional cognitive measures. As the author of the instrument indicates, "The instrument was designed to measure autonomous functioning in problem solving rather than focusing on the appropriate, the conventional and the quick response which is characteristic of most standard cognitive measures." The reader is referred to the book, Cognitive Studies, Volume I, edited by Jerome Hellmuth for a discussion of the theory underlying the construction of the instrument and of its validity and reliability.

The rationale underlying the development of the test and test materials were: 1) relevance to autonomy theory, 2) relevance to later childhood and adulthood, 3) emphasis on behavioral

rather than oral responses, 4) attractiveness of the materials to children, 5) minimal verbal demands on the child, both in instruction and responses, and 6) checks on the child's comprehension of instructions so that low scores will not be the result of not having caught on to the task.

The instrument provides scores on 14 basic variables which are identified and briefly described:

1. Task Initiation: Tendency to explore without direction or permission, to become involved with exploration of material.

2. Curiosity Box: This scale is designed to measure the physical exploratory behavior of the children without direction from the examiner.

3. Curiosity Verbalization: Tendency to explore, manipulate, investigate, and discover in relation to novel stimuli.

4. Fantasy-Related Verbalization: Tendency of the subject to fantasize while exploring novel situations.

5. Impulse Control: Tendency to restrain motor activity when the task demands it.

6. Incidental Learning: Tendency to acquire information not referred to in the instructional stimuli.

7. Intentional Learning: Tendency to acquire information specified in the instructional stimuli.

8. Innovative Behavior: Tendency to generate alternative solutions to problems.

9. Field Independence: Tendency to separate an item from the field or context of which it is a part.

10. Persistence: Attention to a problem with solution-oriented behavior where the goal is specified.

11. Resistance to Distraction: Persistence, with distracting stimuli present.

12. Task Competence: Ratings of tendency to deal effectively with problems of many kinds.

13. Social Competence: Ratings of ability to work comfortably with adults.

14. Kindergarten Prognosis: Ratings of ability to do well in conventional kindergarten.

Medinnis and Johnson Semantic Differential Scale: This scale, devised by Gene R. Medinnis and Theodore M. Johnson and published in 1970, attempts to indicate the parent's attitude toward their children by the statements they accept or reject when made about their children. The Scale has been used in several different forms; the present form takes statements from the original, but does not use all the statements which the original contained. This was done for two reasons: certain of the statements were presumed to be difficult to understand by the respondants, many of whom are deprived in education (and in fact, in retrospect, many of the parents complained of the difficulty of the vocabulary of the scale as used); and several of the statements did not apply to the present clientel.

One score was derived from this scale, with a low score indicating rejection of one's own child and a high score indicating acceptance of the child. Perhaps another, less scientific statement might be that a low score on the instrument indicated that the parent did not like his own child, while a high scorer did.

Parent Q Sort, General Needs Assessments: This Q Sort of expressed needs of the parents of children in a given school was chosen because it purports to measure the values which parents wish the school to inculcate in their children. The Q Sort was developed by the Pennsylvania Department of Education in cooperation with an ESEA Title III Project in 1971. The state of Pennsylvania adopted a "Ten Goals for Quality Education," which became the major areas of the Q Sort, to help ascertain which goals parents feel most important for the schools which they support. In the development of the present program, an eleventh scale was added because of the clientel served by the schools in the sample. The eleven goals are described:

1. Self-Understanding: Every child should acquire the greatest possible understanding of himself and his worthiness.

2. Understanding Others: Every child should acquire understanding and appreciation of persons from social, cultural, and ethnic groups different from his.

3. Basic Skills: Every child should gain mastery of the basic skills in the use of words and numbers.

4. Interest in School and Learning: Every child should acquire a positive attitude toward school and the learning process.

5. Good Citizenship: Each child should acquire the habits and attitudes associated with responsible citizenship.

6. Good Health Habits: Every child should acquire good health habits and the understanding of conditions necessary for maintenance of physical and emotional well-being.

7. Creativity: Each child should be given the opportunity to be creative in one or more fields of endeavor.

8. Vocational Development: Each child should understand the opportunities open to him for preparing himself for a productive life.

9. Understanding Human Accomplishments: Each child should understand human achievement in natural sciences, the social sciences, the humanities, and the arts.

10. Preparation for a Changing World: Each child should be prepared for a world of rapid change and unforseeable demands in which continuing education should be a normal expectation.

11. Custodial Care: Each child should be protected and entertained furing the course of his stay in the schools.

Walker Inventory of Beliefs: The Walker Inventory of Beliefs is actually the instrument devised by Stern, et.al., in hypothesizing a personality model. It gives two dimensions of personality: stereotypicality vs. nonstereotyped, and rational vs. irrational. William Walker has investigated the use of this instrument to measure creativity and acceptance of "difference" in teachers; it indicates that teachers who are less stereopathis, but who are rational, are more adaptive, flexible, outgoing, permissive, and nurturant -- factors which are considered important in fostering creativity.

The stereotyped personality is typified as those who are rigid, non-adaptive, anxious, uncomfortable, and ethnocentric, and generally accept stereotyped statements. At the opposite end are those described as comfortable, adaptive, flexible, and outgoing, and rejective of stereotyped statements.

A rational individual appears to be one whose social relationships are distant and impersonal and reject ideological generalizations; the irrationals are not consistent.

The inventory itself consists of 100 statements to which the subject responds as strong agreement, tend to agree, tend to disagree, or disagree strongly. The items are scored so as to give Scale 1 as Stereotypacility having low scores and Nonstereotypicality as having high scores. Similarly, Scale 2 has Irrationality as low-scoring, and Rationality as high scoring.

California F Scale: This scale purports to measure Fascism in individuals by presenting certain "Fascistic" statements with which the subject either agrees or disagrees. The scale is simple to administer and score, yet shows a high degree of correlation with stereotypicality. This scale was originally normalized on a large group of self-avowed Fascists in California immediately after World War II; during this time, it was simple to find subjects who would admit to being Fascists.

On this scale, the higher the obtained score the more accepting of stereotyped statements the subject is likely to be. Some of the statements seem, to those who measure as being non-rigid on other instruments, to be rather antiquated or old-fashioned, but to those who are stereotyped the statements are generally most agreeable.

The scoring of the scale might be of interest; there were 26 possible responses, which were set up on a Likert scale from +3 to -3; after they were tallied, 78 points were added to all scores, to take care of any possible negative scores.

Zahorik Verbal Feedback Scale: This scale was included in the study to survey the teacher's style of teaching, and the types of reinforcement the teachers gave their pupils. In it the experimenter observed the classroom behavior of the teachers for a timed period and reported the feedback given the children during this time. Zahorik had originally used the scale by interviewing the children in the classroom, but decided that too much subjectivity was involved, and an independent observer was used to do the scoring. The scales used attempt to measure amplified and unamplified positive and negative feedback. Scale I was Positive Feedback with Amplification; Scale II was Positive or Negative with no Amplification; Scale III was Negative with Amplification.

Subjects and Environments

The subjects for this experiment were children between the ages of three and one-half years and six years of age. They were enrolled in 18 kindergartens in the State of Arkansas, with the distribution centered around the city of Little Rock (where there were eight centers) and extending up the Arkansas River Valley toward the West to the western border. The centers were in composition 12 socioeconomically

mixed and six socioeconomically unmixed; no attention was paid at any time to race, color, religion, sex, or national origin. The children in centers which were classified as "inner City" were all drawn from the City of Little Rock, all of which were in Urban Renewal areas. The Miles Chapel center and the Hollingsworth Court center were both Office of Economic Opportunity Day Care Centers; the East End and South Side centers were Model Cities centers. The children from "Urban Areas" were drawn from two cities: the Goodstart Day Care Center in Jacksonville, and the Illinois Street and Spring Street Head Start Centers in Hot Springs. The center at Jacksonville was the only private kindergarten in the survey. The Rural centers were drawn from the ARVAC (Arkansas River Valley Area Council) Head Start Centers.

Insofar as possible, all children at every center were tested; however, in the Miles Chapel and Hollingsworth Court centers, there was insufficient space to allow the children to be tested on the Kansas Social Interaction Observation Procedure. This scale requires free space sufficient for 20 children to have free play indoors; neither center had this much space. Due to parents moving, illness of children, and at times simple lack of attendance of children, not all children were tested at every center.

Table I gives a breakdown of the number of children in the sample by center type as Rural, Urban, and Inner City as

TABLE I

CENTERS BY TYPE, SOCIOECONOMIC MIX, AND NUMBER OF SUBJECTS INCLUDED IN THE STUDY

	Rural				Urban		Inner City	
	Mixed		Unmixed		Mixed	Unmixed	Mixed	Unmixed
Center:	Booneville	28	Morrilton	20	Hot Springs Illinois St.	35	Hot Springs Spring St. 35	Little Rock South Side
	Paris #1	24	Paris #2	38				A 18
	Ozark	25	Dover	23	Jacksonville	31		B 21
	Danville	21						C 21
								Little Rock East End
								A 21
								B 18
								C 21
Sub-Total		98		81	66	35	120	41
Total				179		101		161

	Little Rock Miles	
	Chapel	19
	Hollingsworth Court	22

well as by mixed or unmixed socioeconomic type.

The physical setting of the centers ranged from new buildings designed as kindergarten classrooms (in the East End and South Side centers) through older homes and redecorated private kindergartens in the ARVAC centers to reconditioned apartments in the federal low-cost housing areas of Miles Chapel and Hollingsworth Court. The length of time the children were at the centers varied; some came as early as 7:00 AM, ate breakfast and lunch, and were picked up by parents or older siblings at 4:30 PM; some came at 8:00 AM and were retrieved at 12:00 noon. Generally, the testing was achieved in the morning hours at the schools; on rare occasions, to finish testing, some tests were given after lunch. All children were tested in their school setting.

Data and Statistical Procedure

Rationale for the Use of Statistical Procedures. With the single exception of the zero-order product-moment correlations calculated for the variables employed to evaluate Objective 2, all analyses carried out to test hypotheses in this report were multivariate in nature. Most of the objectives in the project were geared to answering questions, not so much of how one factor or variable affects another factor or variable, but how a number of factors acting in concert influence a variety of pupil behaviors, a variety of parent attitudes, and a variety of behaviors and attitudes on the part of teachers.

A statistical procedure which attempted to establish the effect of one variable on another variable or to assess the strength of the relationship between two variables, while isolating the effects of those two variables from related variables, would give a somewhat misleading picture of the "true" nature of the relationship between the two variables. It must be remembered that any variable taken in isolation may affect the criterion differently from the way it will act in the company of other variables. It also overlooks the fact that multivariate analysis -- precisely by considering all variables simultaneously -- can throw light on how each one of the variables contributes to the relationship.

Two types of multivariate statistical procedures were used to test hypotheses generated from the project objectives:

1. Multivariate analysis of variance
2. Step-wise multiple regression analysis

Both of these procedures operate so as to determine what portion of the total variance of a criterion variable is explained by or accounted for by a particular classification variable or predictor.

The notion of "variance" is fundamental to nearly all forms of inferential statistics, including the two types mentioned above. It is axiomatic that individuals differ in nearly every possible way. If the Peabody Picture Vocabulary Test, for example, is administered to a group of pupils

it might be expected that their scores would range from a low of 35 to a high of 88. The crucial question becomes, what variables or factors can account for this large disparity between scores on the Peabody Picture Vocabulary Test? Hence, it is important to find out how much a particular variable (I.Q. for example) affects individual performance on the PPVT.

The analysis of variance procedure is useful for answering questions (for testing hypotheses) such as: Does socioeconomic mixing make a significant difference in a student's performance on the Peabody Picture Vocabulary Test? In other words, does socioeconomic mixing have a significant <u>effect</u> on pupils' PPVT performance? Multivariate analysis of variance procedures calculate the total amount of variance on a criterion variable such as the PPVT and the amount of the total variance in pupil performance that is attributable to a certain classification variable (i.e., being from a socioeconomically mixed or socioeconomically unmixed center). The variance attributable to the classification (socioeconomic mixing) is compared to the total variance in the criterion (Peabody Picture Vocabulary Test). If the ratio is not too small, then the classification variable is said to have a "statistically significant effect" on the criterion.

The multiple regression procedure is useful for answering questions such as, what variable or combination of variables allows us to predict with the greatest accuracy how a pupil will perform on a test, in a class, and so on. The multiple

regression allows the investigator to determine the most "efficient" combination of predictors. The notion of efficient prediction is important. It is crucial to be able to "account for" as much as the total variance of the criterion variable (e.g., PPVT) as possible, while, at the same time, not having to gather so much information on so many different scales.

To find out what combination of variables leads to the most efficient prediction, the regression analysis looks first at the relationship between one predictor variable (for example, Stout Sub-scale 1) and the criterion variable (PPVT performance). It determines if the predictor accounts for a significant amount of the total variance in the criterion. The multiple regression procedure continues to "add", in a step-wise fashion, more predictor variables and, at each stop, it determines if the additional predictor adds significantly to the amount of variance accounted for by the previous predictors. By the end of the analysis, it is possible to choose that combination of predictors which accounts for the greatest amount of total variance in the criterion and, at the same time, uses the least number of predictors.

CHAPTER III

RESULTS AND CONCLUSIONS

Introduction

The purposes of the study were stated in the form of seven objectives. Some of the objectives were related to each other while others were independent. The pattern followed in the presentation and analysis of the data, therefore, is to state each objective, to state the hypotheses generated from each objective and to present the findings and conclusions.

Objective One

The purpose of Objective One was to assess the influence of socioeconomic mixing in preschool programs on a number of specified classroom processes which have been found to correlate with one or more indicators of program effectiveness. (Classroom processes in mixed and unmixed rural, urban, and inner-city preschool settings were measured using the Cincinnati Autonomy Test Battery, a modified Zahorik Teacher Verbal Feedback Scale, and the Stout Environmental Opportunities Scale.)

Based on Objective One the following hypotheses were tested:

1. There is no difference between socioeconomically mixed and socioeconomically unmixed centers in terms of their effect upon pupils' performance on: A. Stout Sub-scales; B. Stout Total; C. Zahorik Sub-scales;

D. Zahorik Total; and E. Cincinnati Autonomy Test Battery.

2. There is no difference between centers from rural, inner-city, and urban schools in their effect upon pupils' performance on: A. Stout Sub-scales; B. Stout Total; C. Zahorik Sub-scales; D. Zahorik Total; and E. Cincinnati Autonomy Test Battery.
3. There is no interaction between socioeconomic mixing and center location (rural, inner-city, urban) in terms of its effect upon student performance on: A. Stout Sub-scales; B. Stout Total; C. Zahorik Sub-scales; D. Zahorik Total.

Given in Table II is a 3 x 2 multivariate analysis of variance using the three Stout Sub-scales and the three Zahorik Sub-scales as criterion variables, and Center location and type (mixed vs. unmixed) as classification variables. Shown in Table III is the 3 x 2 multivariate analysis of variance using Stout Total and Zahorik Total as criteria and Center location and Center type as classification variables.

In testing to determine if there were differences between location of Centers in terms of their effect on the sub-scales of the Stout, the Zahorik, and the Cincinnati Autonomy Test Battery, the multivariate F was not significant. Nor were there any significant univariate F's for any of those sub-scales.

In testing to determine if Centers with socioeconomic mixing were different from Centers with no mixing on the Stout

TABLE 11

Results of MANOVA Using Center Type and Center Location as Classification Variables and the Stout and Zahorik Subscales as Criterion Variables

I. Test of Main Effects for Center Type

Criterion Variables	MS	Univariate F-Value	Probability Level
Stout (1)	0.44	0.06	.80
Stout (2)	0.11	0.14	.71
Stout (3)	8.03	1.00	.34
Zahorik (1)	51.36	5.72	.03*
Zahorik (2)	16.00	0.64	.44
Zahorik (3)	360.99	2.07	.18
Multivariate F-Value = 0.79 (p<.61)			

II. Test of Main Effects for Center Location

Stout (1)	5.33	0.74	.50
Stout (2)	0.35	0.44	.65
Stout (3)	9.51	1.19	.34
Zahorik (1)	6.52	0.73	.50
Zahorik (2)	34.72	1.40	.29
Zahorik (3)	277.98	1.60	.24
Multivariate F-Value = 1.70 (p<.17)			

III. Test of Interaction Effects of Center Type x Center Location

Stout (1)	3.12	0.43	.66
Stout (2)	1.32	1.66	.23
Stout (3)	8.90	1.11	.36
Zahorik (1)	5.77	0.64	.54
Zahorik (2)	57.87	2.32	.14
Zahorik (3)	106.43	0.61	.56
Multivariate F-Value = 1.10 (p<.44)			

TABLE III

Results of MANOVA Using Center Type and Center Location as Classification Variables and the Stout and Zahorik Total Scores as Criterion Variables

I. Test of Main Effect for Center Type

Criterion Variables	MS	Univariate F-Value	Probability Level
Stout Total	21.78	1.50	.24
Zahorik Total	720.03	2.16	.17

Multivariate F-Value = 1.67 ($p < .23$)

II. Test of Main Effect for Center Location

Stout Total	21.41	1.47	.27
Zahorik Total	124.30	0.37	.70

Multivariate F-Value = 0.82 ($p < .53$)

III. Test of Interaction Effects of Center Type x Center Location

Stout Total	6.88	0.47	.64
Zahorik Total	174.33	0.52	.61

Multivariate F-Value = 0.45 ($p < .77$)

and the Zahorik Sub-scales, the multivariate F was not significant. However, the mixed Centers scored significantly higher ($P < .05$) on the first sub-scale of the Zahorik. Three sub-scales of the Cincinnati Autonomy Test Battery showed significant differences, task initiation ($P < .05$), fantasy-related verbalizations ($P < .05$), and innovative behavior ($P < .05$).

In the determination of whether or not center location made a significant difference on Stout Total score and Zahorik Total score, neither the multivariate F or the univariate F's were significant. In testing to determine if Center type made a difference in terms of Stout Total and Zahorik Total, neither the multivariate F or univariate F's were significant. No significant interaction effect was found between Center location and Center type in terms of Total score on the Stout or the Zahorik.

Neither the Center location nor the Center type appeared to make any difference in the ways in which teachers interacted with their pupils. The one exception found was that teachers in mixed Centers scored significantly higher than teachers in unmixed Centers on the first sub-scale of the modified Zahorik.

Objective Two

The purpose of Objective Two was to assess the influence of socioeconomic mixing in preschool programs upon staff attitudes, and to examine relationships of those attitudes to key aspects of classroom processes. (Staff attitudes in mixed and

unmixed rural, urban and inner-city preschool programs were assessed using the Walker Inventory of Beliefs, Medinnis and Johnson Semantic Differential Scale, California F Scale, and Q.E.P.S. Title III Forced Sort of Educational Goals. Classroom procedures were measured as described in Objective One.)

The following hypotheses were generated from Objective Two:

1. There is no difference between teachers from mixed and unmixed Centers in their performance on: A. Walker Inventory of Beliefs; B. California F-Scale.
2. There is no difference between teachers from rural, urban, and inner-city Centers in their performance on: A. Walker Inventory of Beliefs; B. California F-Scale.
3. There is no interaction effect between Center location and Center type in terms of teacher performance on: A. Walker Inventory of Beliefs; B. California F-Scale
4. There is no difference between types of Centers in terms of their effect upon performance on: Center Q-Sort (Forced Sort of Educational Goals).
5. There is no difference between Center location in terms of its effect upon performance on: Center Q-Sort (Forced Sort of Educational Goals).

6. There is no interaction effect between Center location and Center type in terms of its effect upon teachers' performance on Center Q-Sort (Forced Sort of Educational Goals).
7. There is a relationship between scores from the following measures of staff attitudes and classroom process variables: A. Stout Sub-scales; B. Zahorik Sub-scales; C. Walker Inventory of Beliefs; D. California F-Scale; E. Center Q-Sort.

Given in Table IV is the one-way multivariate analysis of variance with the Walker Inventory of Beliefs Sub-scales and California F-Scale used as criterian variables. Centers were classified as mixed and unmixed.

Shown in Table V is the one-way multivariate analysis of variance with the Center Q-Sort categories as criterian variables. Again, Centers were classified as mixed and unmixed.

Product-moment correlations were calculated for all staff attitude and all classroom process variables. Correlation coefficients were calculated separately for mixed and unmixed Centers and the results are given in Tables VI and VII respectively.

In testing to determine if there were differences between Center types on teachers' performance on the Walker Inventory of Beliefs Sub-scales and the California F-Scale, neither the multivariate F nor any of the univariate F's were significant.

TABLE IV

Results of One-Way MANOVA Using Walker Inventory of Belief Subscales and the California F-Scale as Criteria and Center Type as the Classification Variable

Criterion Variables	MS	Univariate F-Value	Probability Level
Walker (1)	0.51	0.00	.95
Walker (2)	149.23	1.03	.32
California	240.58	0.93	.34
Multivariate F-Value = 1.01 ($p < .40$)			

TABLE V

Results of One-Way MANOVA Using Center Q-Sort Categories as Criteria and Center Type as the Classification Variable

Criterion Variables	MS	Univariate F-Values	Probability Level
Center Sort-1	5.61	0.80	.39
Center Sort-2	0.77	0.08	.78
Center Sort-3	7.63	1.88	.20
Center Sort-4	0.62	0.06	.81
Center Sort-5	4.81	0.66	.43
Center Sort-6	16.63	1.37	.27
Center Sort-7	4.25	0.85	.37
Center Sort-8	10.25	0.84	.38
Center Sort-9	15.23	1.24	.29
Center Sort-10	4.07	0.33	.58
Center Sort-11	0.85	0.11	.74

Multivariate F-Value = 0.59 ($p < .78$)

Results from SES Mixed Centers of Product-Moment Correlations for Staff Attitude and Classroom Process Variables

	STOT2	STOT3	ZHK1	ZHK2	ZHK3	SRT1	SRT2	SRT3	SRT4	SRT5	SRT6	SRT7	SRT8	SRT9	SRT10	SRT11	WALK1	WALK2	CALIF
STOT1	-.24	.58	-.36	.22	.45	-.34	-.22	-.19	.17	.71	-.05	.27	.57	-.75	-.14	.13	-.50	-.29	.14
STOT2		-.28	-.26	-.19	-.44	.09	.72	.55	-.36	.14	.05	-.35	-.35	.14	-.62	.63	.40	.31	.32
STOT3			-.68	.06	.31	.12	-.52	-.50	-.02	.45	.07	.34	.62	-.29	-.23	-.20	-.64	-.30	.31
ZHK1				.29	.09	-.07	-.07	-.04	-.14	-.38	.25	-.03	-.30	.46	.22	-.05	.59	.24	-.52
ZHK2					.82	.80	-.28	-.61	-.31	-.11	.15	-.18	-.31	.53	.28	-.22	.21	.24	-.32
ZHK3						.51	-.56	-.63	.21	-.26	.18	-.02	.32	.01	.25	-.53	-.12	.04	-.08
SRT1							.51	-.16	-.59	-.18	.11	-.51	-.48	.65	.13	-.05	-.01	.11	-.27
SRT2								.89	-.31	.16	-.17	-.69	-.63	-.06	-.21	.75	.27	.24	.08
SRT3									-.17	-.01	-.20	-.54	-.44	-.12	-.21	.58	.11	.01	.17
SRT4										-.35	-.31	.46	.39	-.52	.43	-.54	-.14	-.11	.23
SRT5											-.02	.10	.13	-.41	-.41	.59	-.24	-.01	.10
SRT6												-.34	.42	-.08	-.58	.31	.17	.20	.01
SRT7													.49	-.06	.11	-.58	-.12	-.19	.15
SRT8														-.56	-.38	-.24	-.51	-.32	.38
SRT9															.17	-.27	.41	.16	-.34
SRT10																-.61	-.15	-.23	-.45
SRT11																	.24	.30	.09
WALK1																		.75	-.35
WALK2																			-.24

Results from SES Unmixed Centers of Product-Moment Correlations for Staff Attitude and Classroom Process Variables

	STOT2	STOT3	ZHK1	ZHK2	ZHK3	SRT1	SRT2	SRT3	SRT4	SRT5	SRT6	SRT7	SRT8	SRT9	SRT10	SRT11	WALK1	WALK2	CALIF
STOT1	-.45	-.73	-.03	-.01	-.97	-.74	-.98	-.44	.79	.04	-.38	.94	.01	.27	.60	-.12	.29	.18	.32
STOT2		.03	.18	-.75	.45	.93	.27	-.26	-.51	.26	.35	-.57	.75	-.43	-.28	-.46	-.13	-.04	-.31
STOT3			-.62	.60	.56	.30	.77	.93	-.17	.42	-.33	-.81	-.60	.45	.03	-.19	.07	-.09	-.15
ZHK1				-.68	.27	.16	.01	-.81	-.63	-.87	.94	.24	.68	-.95	-.80	.69	-.12	-.12	-.05
ZHK2					-.14	-.58	.14	.83	.46	.24	-.65	-.03	-.00	.78	.44	.05	.16	.02	.16
ZHK3						.73	.95	.24	-.91	-.26	.59	-.84	.14	-.48	-.78	.30	-.05	-.19	-.32
SRT1							.60	-.03	-.71	.16	.43	-.80	.58	-.45	-.47	-.28	-.11	-.11	-.36
SRT2								.51	-.76	-.11	.35	-.88	-.15	-.22	-.61	.24	-.01	-.18	-.27
SRT3									.17	.52	-.60	-.55	-.83	.72	.33	-.25	.12	-.02	-.03
SRT4										.53	-.86	.59	-.46	.80	.95	-.47	.09	.19	.29
SRT5											-.81	-.31	-.24	.75	.78	-.95	.05	.14	-.03
SRT6												-.11	.65	-.98	-.95	.66	-.12	-.17	-.16
SRT7													.03	.03	.32	.23	.02	.13	.32
SRT8														-.78	-.44	-.05	-.16	-.02	-.16
SRT9															.88	-.56	.14	.14	.15
SRT10																-.71	.09	.20	.20
SRT11																	-.01	-.15	.06
WALK1																		.82	.60
WALK2																			.56

Nor were there any significant differences between Center types in terms of effect upon Center Q-Sort. For both the mixed and unmixed centers a number of significant correlation coefficients were observed.

In general, socioeconomic mixing appeared to make no difference in staff attitude or on the choice of educational goals as measured by the center Q-Sort. For both mixed and unmixed centers, there appeared to be a rather substantial relationship between teacher attitude, teacher behavior, and the choice of educational goals selected for a center.

Objective Three

The purpose of the third objective was to assess the influence of several specified classroom processes upon program effectiveness in socioeconomically mixed and unmixed preschool programs. Program effectiveness was measured using the Tests of General Ability (Inter-American Series), the Peabody Picture Vocabulary Test, and the Cincinnati Autonomy Test Battery. Classroom processes were assessed utilizing the Stout and Zahorik subtests.

Based on Objective Three, the following statistical hypothesis was tested: There is a relationship between scores from the following measures of teacher behavior on program effectiveness: A. Stout Subscales; B. Zahorik Subscales; C. Tests of General Ability; D. Peabody Picture Vocabulary Test; E. Cincinnati Autonomy Test Battery (14 Subscales).

A separate multiple regression analysis was done for mixed and unmixed Centers. The Stout Subscales and the Zahorik Subscales were used as predictor variables in each analysis. The Tests of General Ability, Peabody Picture Vocabulary Test, and Cincinnati Autonomy Test Battery were used as criterion variables. Shown in Table VIII and Table IX are the regression analyses for the mixed and unmixed centers respectively.

For the socioeconomically mixed centers, the variables or combination of variables which yielded significant prediction on the criterion variables were: (1) the second sub-scale of the Modified Zahorik, unamplified positive and negative feedback on the PPVT ($R = .32$; $P < .05$); (2) the third sub-scale of the Stout, Child-to-Group Opportunities on the Test of General Abilities ($R = .28$; $P < .05$).

No variables or combination of criterion variables accounted for a significant amount of variance in pupil performance on the second, third, seventh, ninth, tenth, and fourteenth sub-scales of the Cincinnati Autonomy Test Battery. For the remaining sub-scales, the significant predictor variables of pupil performance were: (1) the third sub-scale of the Zahorik, (amplified negative feedback) on the first sub-scale of the Cincinnati Autonomy Test Battery (curiosity) ($R = .41$; $P < .05$); (2) the second sub-scale of the Stout (adult Modeling) and the first sub-scale of the Modified Zahorik (amplified positive verbal feedback) on the fourth sub-scale of the Cincinnati Autonomy Test Battery (fantasy-related verbalization) ($R = .48$;

TABLE VIII

Results of Multiple Regression Analysis for SES Mixed Centers Using Stout and Zahorik Subtests as Predictor Variables and the PPVT, Test of General Abilities and the Cincinnati Autono Test Battery Subscales as Criterion Variables

Criterion Variable	Combination of Predictor Variables Giving Most Efficient Prediction of Pupil Performance	Multiple Regression Coefficient (R=)	Signif. Level
PPVT	Zahorik 2	.32	$p < .05$
T. of Gen. Abil.	Stout 3	.28	.05
Cincinnati ATB			
Subscale 1	Zahorik 3	.41	.05
Subscale 2	Zahorik 2 & 3	.23	N.S.
Subscale 3	None	-	N.S.
Subscale 4	Stout 2 & Zahorik 1	.48	.05
Subscale 5	Zahorik 2 & 3	.42	.05
Subscale 6	Stout 2 & 3	.31	.05
Subscale 7	Stout 1	.20	N.S.
Subscale 8	Stout 1 & 3	.37	.05
Subscale 9	None	-	N.S.
Subscale 10	Zahorik 1 & 2	.27	N.S.
Subscale 11	Stout 1	.27	.05
Subscale 12	Stout 2 & Zahorik 1	.47	.05
Subscale 13	Zahorik 2	.39	.05
Subscale 14	Zahorik 2	.24	N.S.

TABLE IX

Results of Multiple Regression Analysis for SES Unmixed Centers Using Stout and Zahorik Subtests as Predictor Variables and the PPVT, Test of General Abilities and the Cincinnati Autonomy Test Battery Subscales as Criterion Variables

Criterion Variable	Combination of Predictor Variables Giving Most Efficient Prediction of Pupil Performance	Multiple Regression Coefficient (R=)	Signif. Level
PPVT	Zahorik 1	.29	P< .05
Test of Gen. Abil.	Zahorik 3	.31	.05
Cincinnati A.T.B.			
Subscale 1	Zahorik 3	.29	
Subscale 2	Zahorik 2	.37	.05
Subscale 3	Stout 3, Zahorik 2 & 3	.36	.05
Subscale 4	Zahorik 2	.27	N.S.
Subscale 5	Stout 2	.24	N.S.
Subscale 6	Stout 3 & Zahorik 1	.25	.05
Subscale 7	Stout 1	.17	N.S.
Subscale 8	Zahorik 3	.36	N.S.
Subscale 9	Stout 1	.26	.05
Subscale 10	Stout 1 & Zahorik 3	.31	.05
Subscale 11	Stout 1	.18	N.S.
Subscale 12	Stout 1 & 3	.28	N.S.
Subscale 13	Zahorik 2	.29	N.S.
Subscale 14	Zahorik 3	.22	.05
			N.S.

P < .05); (3) the second and third sub-scale of the Modified Zahorik (unamplified positive and negative feedback) on the fifth sub-scale of the Cincinnati Autonomy Test Battery (impulse control) (R = .41; P < .05); (4) the second and third sub-scale of the Stout (adult modeling and child-to-group) on the sixth sub-scale of the Cincinnati Autonomy Test Battery (incidental learning) (R = .31; P < .05); (5) the first and third sub-scales of the Stout (child-to-adult and child-to group) on the eighth sub-scale of the Cincinnati Autonomy Test Battery (field independence) (R = .37; P < .05); (6) the first sub-scale of the Stout (child-to-adult) on the eleventh sub-scale of the Cincinnati Autonomy Test Battery (resistance to distraction) (R = .27; P < .05); (7) the second sub-scale of the Stout (adult modeling) and the first sub-scale of the modified Zahorik (amplified positive feedback) on the twelfth sub-scale of the Cincinnati Autonomy Test Battery (task competence) (R = .47; P < .05); and (8) the modified Zahorik sub-scale number two (unamplified positive and negative feedback) on the thirteenth sub-scale of the Cincinnati Autonomy Test Battery (social competence) (R = .39; P < .05).

For the socioeconominally unmixed Centers the combination of variables which yielded significant prediction on the criterion variable, Peabody Picture Vocabulary Test was the first sub-scale of the modified Zahorik (amplified positive feedback) (R = .39; P < .05). No variable or combination of variables accounted for a significant amount of

variance in pupil performance on the third, fourth, sixth, seventh, tenth, eleventh, twelfth, or fourteenth sub-scales of the Cincinnati Autonomy Test Battery. For the remaining sub-scales the significant predictor variables of pupil performance were: (1) the third sub-scale of the modified Zahorik (amplified negative feedback) on the first sub-scale of the Cincinnati Autonomy Test Battery (task initiation) ($R = .21$; $P < .05$); (2) the second sub-scale of the modified Zahorik (unamplified positive and negative feedback) on the second sub-scale of the Cincinnati Autonomy Test Battery (curiosity) ($R = .37$; $P < .05$); (3) the second sub-scale of the Stout (adult modeling) on the fifth sub-scale of the Cincinnati Autonomy Test Battery (impulse control) ($R = .24$; $P < .05$); (4) the third sub-scale of the modified Zahorik (amplified negative feedback) on the eighth sub-scale of the Cincinnati Autonomy Test Battery (innovative behavior) ($R = .36$; $P < .05$); (5) the first sub-scale of the Stout (child-to-adult opportunities) on the ninth sub-scale of the Cincinnati Autonomy Test Battery (field independence) ($R = .26$; $P < .05$); and (6) the second sub-scale of the modified Zahorik (unamplified positive and negative verbal feedback) on the thirteenth sub-scale of the Cincinnati Autonomy Test Battery (social competence) ($R = .29$; $P < .05$).

For both mixed and unmixed centers, the Peabody Picture Vocabulary Test and the Test of General Abilities, which are essentially intelligence-achievement measurements, were

influenced by the center type and the teachers' classroom behavior as measured by the Stout and modified Zahorik Scales. Teacher behavior appeared to account for about 10 percent of the variance in pupil performance on the Peabody Picture Vocabulary Test and on the Test of General Abilities.

No one of the Stout or Zahorik sub-scales seems to be predictive across the board. For several kinds of learning, the Zahorik sub-scales were more efficient than the Stout sub-scales as predictor variables, indicating that the effectiveness of teacher behavior may be substantially influenced by organizational behavior (center type) but is still the main predictor variable for many kinds of learning.

Objective Four

The purpose of Objective Four was to assess relationships of staff attitude to program effectiveness in socioeconomically mixed and unmixed preschool programs. (Staff attitude was assessed as described under Objective Two; program effectiveness was assessed as described under Objective Three.)

Based on Objective Four, the following statistical hypotheses were tested:

1. There is a relationship between scores from the following measures of staff attitude and program effectiveness: A. Walker Inventory of Beliefs; B. California F-Scale; C. Peabody Picture

Vocabulary Test; D. Test of General Abilities; E. Cincinnati Autonomy Test Battery.

2. There is a relationship between scores from the Forced Sort of Educational Goals and the following program effectiveness variables: A. Peabody Picture Vocabulary Test; B. Test of General Abilities.

A multiple regression analysis was done for mixed centers using the Walker Inventory of Beliefs Sub-scales and the California F-Scale as predictor variables. The Peabody Picture Vocabulary Test, Test of General Abilities and the Cincinnati Autonomy Test Battery were used as criterion variables. The results are given in Table X.

No combination of predictors accounted for a significant amount of variance in pupil performance on the Peabody Picture Vocabulary Test. The combination of variables which gives the most efficient prediction of performance on the Test of General Abilities was the two sub-scales of the Walker Inventory of Beliefs (stereotypicality and rationality) ($R = .41$; $P < .05$). The variables which gave the most efficient prediction of pupil performance on the first sub-scale of the Cincinnati Autonomy Test Battery (task initiation) was the Walker sub-scale two (rationality) ($R = .33$; $P < .05$).

No combination of predictor variables accounted for a significant amount of variance in pupil performance on the following subscales of the Cincinnati Autonomy Test Battery:

TABLE X

Results of Multiple Regression Analysis for SES Mixed Centers Using the Walker Inventory of Beliefs Subtests and the California F-Scale as Predictor Variables and the PPVT, Test of General Abilities, and the Cincinnati Autonomy Test Battery Subscales as Criterion Variables

Criterion Variables	Combination of Predictor Variables Giving Most Efficient Prediction of Pupil Performance	Multiple Regression Coefficient (R=)	Signif. Level
PPVT	None	---	N.S.
Test of Gen. Abil.	Walker 1 & 2	.41	$p < .05$
Cincinnati ATB			
Subscale 1	Walker 2	.43	.05
Subscale 2	None	---	N.S.
Subscale 3	None	---	N.S.
Subscale 4	Walker 1 & 2, Cal. F	.55	.05
Subscale 5	Walker 1 & 2, Cal. F	.46	.05
Subscale 6	Walker 1 & Cal. F	.23	N.S.
Subscale 7	None	---	N.S.
Subscale 8	Walker 2	.18	N.S.
Subscale 9	Walker 1	.26	.05
Subscale 10	None	---	N.S.
Subscale 11	Cal. F	.18	N.S.
Subscale 12	Walker 2 & Cal. F	.48	.05
Subscale 13	Walker 2 & Cal. F	.48	.05
Subscale 14	Walker 2	.27	N.S.

numbers two, three, six, seven, eight, ten, eleven, and fourteen. For the remaining sub-scales of the Cincinnati Autonomy Test Battery: (1) the combination of variables which gave the most efficient prediction of pupil performance on the fourth sub-scale (fantasy-related verbalization) was Walker subtests one (stereotypicality) and two (rationality) and the California F-Scale ($R = .55$; $P < .05$); (2) the combination of variables which gave the most efficient prediction of pupil performance on the fifth subscale (impulse control) was Walker subtests one (stereotypicality) and two (rationality), and the California F-Scale ($R = .46$; $P < .05$); (3) the variable which gave the most efficient prediction of pupil performance on the ninth sub-scale (field independence) was Walker subtest one (stereotypicality) ($R = .26$; $P < .05$); (4) the two variables which gave the most efficient prediction of pupil performance on the twelfth subscale (task competence) was Walker subtest two (rationality) and the California F-Scale ($R = .48$; $P < .05$); and (5) the two variables which gave the most efficient prediction of pupil performance on the thirteenth subscale (social competence) was Walker subtest two (rationality) and the California F-Scale ($R = .48$; $P < .05$).

The combination of Center Q-Sort variables which gave the most efficient prediction of pupil performance on the Peabody Picture Vocabulary Test was Sort variables four (interest in school and learning); eight (vocational development); nine (understanding human accomplishment); and eleven (custodial

care) ($R = .94$; $P < .05$). The combination of Center Q-Sort variables which gave the most efficient prediction of pupil performance on the Test of General Abilities was Sorts five (good citizenship) and ten (preparation for a changing world) ($R = .49$; $P < .05$).

For mixed centers, the teachers' attitude made a significant difference in pupil performance as measured by the Test of General Abilities. Approximately 16 percent of the variance in pupil performance on this measure was accounted for by teacher attitude.

Teacher attitude varied in terms of its influence on pupil performance on the Cincinnati Autonomy Test Battery. On sub-scales four (fantasy-related verbalization); five (impulse control); twelve (task competence); and thirteen (social competence), teacher attitude accounted for approximately 25 percent of the variance in pupil performance.

The educational goals chosen by each center had an extremely strong influence on pupil performance, especially on the Peabody Picture Vocabulary Test where over 90 percent of the variance in pupil performance was accounted for.

Since teacher attitude and goal orientation did not seem to influence verbal feedback patterns or center type scores, it can be strongly argued that teacher attitude and goal orientation influence the <u>focus</u> of verbal feedback and reinforcement rather than <u>frequence</u>.

Objective Five

The purpose of Objective Five was to assess the influence of socioeconomic mixing in preschool programs upon parental attitudes and to examine relationships of those attitudes to program effectiveness in socioeconomically mixed and unmixed preschool programs. Parent attitudes were assessed using the Medinnis and Johnson Semantic Differential Scale and the Forced Sort of Educational Goals. Program effectiveness was measured as described under Objective Three.

Based on Objective Five the following statistical hypotheses were tested:

1. There is no difference between socioeconomically mixed and unmixed Centers in terms of their influence on parent attitudes as measured by performance on:
   A. Parent Q-Sort (Forced Sort of Educational Goals);
   B. Medinnis and Johnson Semantic Differential Scale.
2. There is a relationship between parent attitude (as measured by Parent Q-Sort and Semantic Differential Scale) and the following measures of program effectiveness: A. Peabody Picture Vocabulary Test;
   B. Test of General Abilities.

A one-way multivariate analysis of variance using Parent Q-Sort and the Medinnis and Johnson Semantic Differential Scale as criterion variables and Center type as the classification variable.

A separate multiple regression analysis for mixed and unmixed Centers was done. The Parent Q-Sort and the McInnis and Johnson Semantic Differential Scale were used as predictor variables in each analysis. The Peabody Picture Vocabulary Test and the Test of General Abilities were used as criterion variables. The results are provided in Table XI.

In testing to determine if there were differences between types of Centers (mixed vs. unmixed) in terms of their effect on parent performance on the Forced Sort of Educational Goals and the Semantic Differential Scale, the multivariate F was significant. However, parents from mixed centers scored significantly higher on the Semantic Differential Scale ($P < .05$) than parents from unmixed centers.

The combination of variables in mixed Centers which gave the most efficient prediction of performance on the Peabody Picture Vocabulary Test was Parent Q-Sorts seven (creativity); eight (vocational development; and ten (preparation for a changing world) ($R = .66$; $P < .05$). The variable which gave the most efficient prediction of pupil performance on the Test of General Abilities was Parent Q-Sort three (basic skills) ($R = .27$; $P < .05$).

The variable which gave the most efficient prediction of pupil performance in unmixed centers on the Peabody Picture Vocabulary Test was Parent Sort four (interest in school and learning) ($R = .53$; $P < .05$), while the variable which gave the most efficient prediction of pupil performance on the Test

TABLE VI

Results of One-Way MANOVA Using Parent Q-Sort and the Medinnis-Johnson Sementic Differential as Criterion Variables and Center Type as the Classification Variable

Criterion Variables	MS	Univariate F-Value	Probability Level
Parent Sort-1	0.53	0.05	.83
Parent Sort-2	0.82	0.09	.77
Parent Sort-3	8.60	1.14	.29
Parent Sort-4	0.11	0.01	.91
Parent Sort-5	0.22	0.02	.88
Parent Sort-6	0.00	0.00	.99
Parent Sort-7	3.22	0.37	.54
Parent Sort-8	9.86	0.83	.36
Parent Sort-9	7.39	0.64	.42
Parent Sort-10	0.15	0.02	.89
Parent Sort-11	29.64	2.59	.11
Sement. Diff.	2704.65	5.12	.03*

Multivariate F-Value = 0.78 ($p < .66$)

of General Abilities was Parent Sort four (interest in school and learning) ($R = .48$; $P < .05$).

In general, Center type appeared to have very little influence on parent attitude. The one significant univariate F may well be a chance occurrence.

For mixed and unmixed Centers, parents' choice of educational goals was a significant influence on pupil performance as measured by the Peabody Picture Vocabulary Test and the Test of General Abilities. It is interesting to note that goal choices which seemed to have the greatest effect on pupil performance differed from mixed to unmixed Centers. The rather limited number of cases available for use in each multiple regression analysis makes it difficult to draw strong inferences about the effects of specific educational goals on pupil performance, however.

Objective Six

The purpose of Objective Six was to gather data for the development of a system for classifying preschool children according to socioeconomic status; this classification system may include information such as parent job description, parent education level, age and sex of siblings, whether the child is from a one- or two-parent family, whether the preschool setting is urban, rural or inner-city, and family income.

Based on Objective Six, the following statistical hypotheses were tested:

1. There is a relationship between the following socio-economic factors: A. Advantaged and Disadvantaged Family; B. Single or Two-Parent Family; C. Age of Father; D. Education Level of Mother; E. Mother's Job Classification; F. Age of Mother; . . . . . and the following measures of pupil performance: A. Peabody Picture Vocabulary Test; B. Test of General Abilities.

A multiple regression analysis was carried out for all Centers using selected socioeconomic factors as predictors and pupil performance on the Peabody Picture Vocabulary Test and the Test of General Abilities as criteria.

The combination of variables which gave the most efficient prediction of pupil performance on the Peabody Picture Vocabulary Test was being from an advantaged or disadvantaged family, age of father, and job classification of mother ($R = .93$; $P < .05$).

The combination of socioeconomic variables which gave the most efficient prediction of pupil performance on the Test of General Abilities was being from an advantaged or disadvantaged family, a single or two-parent family, and educational level of mother ($R = .97$; $P < .05$). However, it should be noted that because of the difficulty in obtaining large "Ns", the results are as conclusive as desired.

Objective Seven

The purpose of Objective Seven was to develop a rating

scale for classifying preschools according to program type; this program type classification system must, in order to be considered successful, be predictive of program effectiveness in preschool programs incorporating socioeconomic heterogeneity.

Based on Objective Seven, the statistical hypothesis tested was: There is a relationship between scores from the following measures of center type (organizational behavior) and program effectiveness: A. Stout Sub-scales; B. Peabody Picture Vocabulary Test; C. Test of General Abilities; D. Cincinnati Autonomy Test Battery (14 sub-scales).

A multiple regression analysis was done using the Stout sub-scales as predictor variables and the Peabody Picture Vocabulary Test, Test of General Abilities, and the Cincinnati Autonomy Test Battery as criterion variables. The results are given in Table XII.

No combination of Stout Sub-scales accounted for a significant amount of variance in pupil performance on the Peabody Picture Vocabulary Test. The most efficient combination of Stout Sub-scales as predictors of pupil performance on the Test of General Abilities was Stout sub-scale three (child-to group opportunities) ($R = .27$; $P < .05$).

No combination of variables from the Stout accounted for a significant amount of variance in pupil performance on the second, third, seventh, ninth, tenth, and fourteenth sub-scales of the Cincinnati Autonomy Test Battery.

TABLE XII

Results of Multiple Regression Analysis Using Stout Subtests as Predictor Variables and the PPVT, Test of General Ability, and the Cincinnati Autonomy Test Battery Subscales as Criterion Variables

Criterion Variables	Combination of Predictor Variables Giving Most Efficient Prediction of Pupil Performance	Multiple Regression Coefficient (R=)	Signif. Level
PPVT	Stout 2	.18	N.S.
Test of Gen. Abil.	Stout 3	.27	$p < .05$
Cincinnati ATB			
Subscale 1	Stout 1 & 2	.39	.05
Subscale 2	None	---	N.S.
Subscale 3	None	---	N.S.
Subscale 4	Stout 3	.37	.05
Subscale 5	Stout 1,2,3	.42	.05
Subscale 6	Stout 2 & 3	.29	.05
Subscale 7	Stout 2	.17	N.S.
Subscale 8	Stout 1 & 3	.37	.05
Subscale 9	None	---	N.S.
Subscale 10	None	---	N.S.
Subscale 11	Stout 1	.26	.05
Subscale 12	Stout 2	.27	.05
Subscale 13	Stout 2	.38	.05
Subscale 14	None	---	N.S.

For the remaining sub-scales, the significant predictor variables of pupil performance were: (1) the first and second sub-scales of the Stout (child-to-adult and adult modeling) on the first sub-scale of the Cincinnati Autonomy Test Battery (task initiation) ($R = .39$; $P < .05$); (2) the third sub-scale of the Stout (child-to-group) on the fourth sub-scale of the Cincinnati Autonomy Test Battery (fantasy-related verbalization) ($R = .37$; $P < .05$); (3) the second and third sub-scales of the Stout (adult modeling and child-to-group) on the sixth sub-scale of the Cincinnati Autonomy Test Battery (incidental learning) ($R = .29$; $P < .05$); (4) the first and third sub-scales of the Stout (child-to-adult and child-to-group) on the eighth sub-scale of the Cincinnati Autonomy Test Battery (innovative behavior) ($R = .37$; $P < .05$); (5) the first sub-scale of the Stout (child-to-adult) on the eleventh sub-scale of the Cincinnati Autonomy Test Battery (resistance to distraction) ($R = .26$; $P < .05$); (6) the second sub-scale of the Stout (adult modeling) on the twelfth sub-scale of the Cincinnati Autonomy Test Battery (task competence) ($R = .27$; $P < .05$); (7) the second sub-scale of the Stout (adult modeling) on the thirteenth sub-scale of the Cincinnati Autonomy Test Battery (social competence) ($R = .38$; $P < .05$).

In general, the sub-scales of the Stout Environmental Opportunities Scale were useful in predicting pupil performance, though the Stout sub-scales rarely accounted for more than 15 percent of the variance in pupil performance. However, Stout

scale score range among the 18 test centers was small (ten through fifty), leaving the possibility that larger differences in Stout sub-scale scores could account for larger variations in pupil performance.

A multiple regression analysis on all subjects was carried out using the "new" socioeconomic factors as predictors and the following measures of parent attitude as criteria: A. Parent Q-Sort; and B. Medinnis and Johnson Semantic Differential. This analysis was done because it was felt that a good index of socio-economic status should be related to attitudes showed by members of different socioeconomic groups.

There was not a sufficient number of cases to permit analysis of data for parent Q-Sort numbers one, three, four, eight, ten, and eleven, nor the Medinnis and Johnson Semantic Differential Scale scores.

The most efficient combination of socioeconomic predictors for Parent Sort Two (understanding others) was educational level of mother ($R = .90$; $P < .05$). This socioeconomic predictor alone accounted for 80% of the variance in Parent Q-Sort Two. The most efficient combination of SES predictors for Parent Q-Sort Five (good citizenship) was single or two-parent family, educational level of mother, and mother's job classification ($R = .94$; $P < .05$).

The most efficient conbination of SES predictors for Parent Q-Sort Six (good health habits) was single or two-parent family, age of father, and educational level of mother ($R = .97$; $P < .05$).

The most efficient combination of SES predictors for Parent Q-Sort Seven (creativity) was advantaged or disadvantaged family, single or two-parent family, age of father, and educational level of mother ($R = .99$; $P < .05$). The most efficient combination of SES predictors for Parent Q-Sort Nine (understanding human accomplishment) was age of mother, educational level of mother, job classification of mother ($R = .99$; $P < .05$)..

Too much faith should not be placed in the very high multiple regression coefficients reported for this analysis. The results obtained suggest that socioeconomic status may have a strong relationship to parents' ideas about what children should learn. Additional investigation of this relationship would seem to be warranted.

A multiple regression analysis on all subjects was carried out using the discrepancy between Parent Q-Sort and Center Q-Sort as predictors and pupil performance on the Peabody Picture Vocabulary Test, Test of General Abilities, and the Cincinnati Autonomy Test Battery as criteria. This analysis was added since educational goals chosen by parents and educational goals chosen by Centers were found to be related to pupil performance (see results from Objective Two and Objective Five). It was felt that if, for example, parents and Centers value similar educational goals for pupils, the effects on pupil performance might be enhanced.

The discrepancy scores did not account for a significant amount of variance in pupil performance as measured by the Test of General Abilities or the Cincinnati Autonomy Test Battery sub-scales, with one exception. The discrepancy score did account for a significant amount of variance in pupil performance on the Peabody Picture Vocabulary Test and on Cincinnati Autonomy Test Battery sub-scale eleven (resistance to distraction).

The small number of cases make clear inferences difficult to draw, but the discrepancy score between goals chosen by parents and the goals chosen by Centers did not appear to be an efficient predictor of pupil performance in general.

Conclusions and Implications

The major conclusions which can be drawn from this research effort are:

1. Conclusions drawn from Phase I and Phase II research were supported. In general, a socioeconomically mixed preschool is likely to produce larger gains in cognitive and social development than an unmixed preschool.
2. Certain teacher verbal feedback patterns (Zahorik Scale) and center type differences (Stout Scale) produced different results in mixed centers than in unmixed centers. This may mean that a style of verbal feedback appropriate in an unmixed center may not be appropriate in a mixed center and vice versa. The

same appears to be true of center type. This finding indicates the existence of a substantial opportunity for developing precisely focused in-service training and staff development programs. For both mixed and unmixed centers, the Peabody Picture Vocabulary Test and the Test of General Abilities, which are essentially intelligence-achievement measures, were influenced by a combination of teacher verbal feedback patterns and the center type as measured by the Stout Scale. Various combinations of Stout and Zahorik Sub-Scales appeared to account for about 10 per cent of the variance in pupil performance on the Peabody Picture Vocabulary Test and on the Test of General Abilities.

3. Teacher verbal feedback patterns were significantly influenced ($P < .05$) by the existence or absence of socioeconomic mixing in the classroom. Teachers in mixed centers employed more amplified positive verbal feedback than did teachers in unmixed centers. This shift in teacher behavior may help to explain the increase in subject adult interaction in mixed centers found in Phase I and Phase II research. This may also give a clue as to why a particular pattern of teacher verbal feedback may produce different results in a mixed center than in an unmixed center.

4. On four sub-scales of the Cincinnati Autonomy Test Battery, teacher attitude, as measured by the Walker Inventory of Beliefs and the California F Scale, accounted for approximately 25 percent of the variance in pupil performance. Those four sub-scales were fantasy verbalization (4), impulse control (5), task competence (12), and social competence (13). Other combinations of the Walker Inventory of Beliefs and the California F Scale accounted for approximately 16 percent of the variance in pupil performance on the Test of General Abilities. Since there was very little interaction effect between teacher attitude measurement and teacher verbal feedback patterns, it would seem that the substantial impact of teacher attitude upon pupil performance must be the result of -- not <u>how</u> teachers reinforce--but <u>what</u> teachers reinforce. The impact of teacher goal orientation upon pupil performance further supports this hypothesis.
5. The educational goals chosen by each center had an extremely strong influence on pupil performance, especially on the Peabody Picture Vocabulary Test where over 90 percent of the variance in pupil performance was accounted for by the centers' goald orientations.
6. For mixed and unmixed centers, parents' choice of educational goals had a significant influence on

pupil performance as measured by the Peabody Picture Vocabulary Test and the Test of General Abilities. However, it is very interesting to note that the parental goal choices which seemed to have the greatest effect on pupil performance differed from mixed to unmixed centers. This finding may indicate that the parental attitudes toward educational goals which would be most helpful in an unmixed center may not be the same as those which would be most helpful in a mixed center. Put another way, the mixed center may be better able to enhance the effects of certain parental goal orientations than an unmixed center. This finding has implications for the design of parent involvement programs.

7. The discrepancy between parental goal orientation and center goal orientation accounted for a significant amount of variance in pupil performance on the Peabody Picture Vocabulary Test and on Sub-Test number eleven (resistance ot distraction) of the Cincinnati Autonomy Test Battery.
8. From a purely practical point of view, it appears that the most reliable combination of predictor variables would consist of:
   a) whether the center is socioeconomically mixed or unmixed;

b) the center's structural type (Stout Scale);

c) teacher verbal feedback patterns (Zahorik Scale):

d) teacher attitude, particularly as measured by the F Scale and the Inventory of Beliefs; and

e) teacher goal orientation.

Depending upon educational objectives, the optimum combination of these variables could, with the aid of additional well-planned research, be described and the results used by preschool management to institute deliberate change in the preschool organization and program.

The practical implications of these findings for policy and future research appear to be clear cut. First, three years of research have consistently proven that socioeconomic mixing in preschool programs is better for children than socioeconomic homogeneity. When the advantaged to disadvantaged ratio is from 25/75 to 50/50, there are no significant negative effects upon either advantaged or disadvantaged children.

Second, since all predictor variables measured in this research (with the exception of the group mix) were uncontrolled by the researchers, the numerous significant interaction effects can reasonably be expected to indicate trend. The only practical means of testing such an hypothesis would be to deliberately arrange a preschool setting to maximize selected positive predictor variables and positive predictor combinations, while minimizing selected negative predictor variables and negative combinations.

Nearly all of the predictor variables selected for inclusion in this research are ones which can be directly controlled by preschool management. For example, both the California F Scale and the Walker Inventory of Beliefs are easy to administer, easy to score, and easy to interpret. Preschool managers could easily include these tests in their hiring and/or placement decision-making processes. Knowledge gained via the modified Zahorik Verbal Feedback Scale and the QEPS Forced Sort of Educational Goals could easily serve as the basis for in-service teacher training. The QEPS Forced Sort of Educational Goals can also assist preschool managers in defining organizational purposes. A preschool's organizational configuration and structural behavior, in the sense of the Stout Scale, can easily be manipulated by center management. The variables measured by the Stout Scale are perhaps the easiest of all for management to control. A parent involvement program could be directly related to producing beneficial changes in parental goal orientation, as well as parents' attitudes toward their children.

Taken gradually, most of the changes which would appear from this research to be beneficial are easy and inexpensive. It seems obvious that the next logical step is to test the practicality and reliability of deliberate application of these findings.

It is not suggested that the kinds of changes mentioned above are all that need to be considered by preschool management. The entire area of curriculum development, resource materials,

more specific staff development programs, internal accountability, effective personnel management, and many other important considerations have not been addressed here. This research has deliberately investigated the organizational environment (macro-level) in which these other important conditions operate.

We also wish to stress again that this research does not indicate that there is a single optimum organizational environment for preschools. Rather, different environmental conditions will enhance a preschool's ability to achieve different educational objectives. If future research supports these findings, parent involvement in selecting center goal orientation and in center evaluation can be expected to become increasingly predominant, increasingly controversial, and a potentially powerful aid to improving preschool management. Coupled with goal oriented budgeting processes, such clarity of purpose may alter much of our current thinking about the nature of accountability in education.

BIBLIOGRAPHY

BIBLIOGRAPHY

Baker, Eva L. Project on Research on Objective Based Evaluation Educational Technology. 10:56-9, August 1970.

Bandura, Albert and Menlove, F. L. Factors Determining Vicarious Extinction of Avoidance Behavior Through Symbolic Modeling. Journal of Personality and Social Psychology. 8(2, pt. 1): 99-108, 1968.

Bernstein, Basil. Social Class, Linguistic Codes and Grammatical Elements, Language and Speech, 5(1962).

Brackbill, Yvonne and George G. Thompson. Behavior in Infancy and Early Childhood. The Free Press: New York.

Brody, Erness B. Effects of Creativity and Intelligence on Teacher Ratings. British Journal of Educational Psychology. 40:342-4, November 1970.

Brozovich, Richard W. Characteristics Associated With Popularity Among Different Racial and Socioeconomic Groups of Children. Journal of Educational Research. 63:441-4, July 1970.

Di Lorenzo, Louis T. Prekindergarten Programs for Educationally Disadvantaged Children. Unpublished study supported by Contract No. OE6-10-040 from the Department of Health, Education and Welfare, Office of Education Bureau of Research. (1960).

Edwards, Allen L. Experimental Design in Psychological Research. Revised Edition. New York: Holt, Rinehart and Winston (1960).

Feitelson, Dina, Shoshana Weintraub and Ora Michaeli. Social Interaction in Heterogeneous Pre-Schools in Isreal. Unpublished report supported by Grant No. SRS/WA-ISR-20-66 of the International Research Program, Social and Rehabilitation Services, U. S. Department of Health, Education and Welfare in cooperation with the Isreali Ministry of Education and the Municipality of Jerusalem.

Ferguson, George A. Statistical Analysis in Psychology and Education. Second Edition. McGraw-Hill (1966).

Hellmuth, Jerome, ed. Cognitive Studies. Vol. I. "Tests for the Evaluation of Early Childhood Education: The Cincinnati Autonomy Test Battery." Banta, Thomas J., Brunner/Mazel, Inc., 1970.

Medinnis, Gene R., et.al. Parental Perceptions of Kindergarten Children. Journal of Educational Research. 63:379-81, April 1970.

Nelson, Dean D. Study of School Achievement Among Adolescent Children With Working and Non-working Mothers. Journal of Educational Research. 62:456-8, July 1969.

Polansky, Norman A. "The Concept of Verbal Accessibility." Smith College Studies in Social Work, 36(1965).

Polansky, Norman A. "On Duplicity in the Interview." American Journal of Orthopsychiatry, 32(1967).

Polansky, Norman A. and Sara Q. Brown. "Verbal Accessibility and Fusion Fantasy in a Mountain County." American Journal of Orthopsychiatry, 37(1967).

Polansky, Norman A., Robert D. Borgman, Christine DeSaix and Betty Jane Smith. "Verbal Accessibility of the Appalachian Mother: A Casework Challenge." Social Work Practice: 1969 (New York: Columbia University Press, 1969).

Popham, W. J. Educational Statistics Use and Interpretation. Harper & Row (1967).

Scarr, Sandra. How to Reduce Authoritarianism Among Teachers: The Human Development Approach. Journal of Educational Research. 63:367-72, April 1970.

Schrank, Wilburn R. Further Study of the Labeling Effect of Ability Grouping. Journal of Educational Reserach. 63:358-60, April, 1970.

Urich, Ted R. Q-Sort Analysis of Attitudes in School Personnel in Iowa Toward Collective Negotiations. Journal of Educational Research. 63:74-7, October 1969.

Vane, Julia R. and Davis, W. M. Factors Related to the Effectiveness of Preschool of Programs With Disadvantaged Children. Journal of Educational Research. 67:297-9. March 1971.

Zahorik, John A. Pupil Perception of Teachers' Verbal Feedback. Elementary School Journal. 71:105-14, November 1970.

Zahorik, John A. Teacher Verbal Feedback and Content Development. Journal of Educational Research. 63:419-23. May 1970.

APPENDIX

Personal Information Sheet

Zahorik Verbal Feedback Scale

Medinnis-Johnson Scale of Values

Cincinnati Autonomy Test Battery

Kansas Social Interaction Observation Procedure

Inventory of Beliefs

Stout Environmental Opportunities Scale

Name_____

Age_____ years _____months Sex M F (circle)

School_____Rural Urban Inner-City
(circle)

Adv. Disadv. Single parent home_____
(circle) Two-parent home_____
(check)

Siblings:
direction - oldest child and
downward (count half or foster
children as siblings)

sex age

_____

_____

_____

_____

_____

_____

Parents' ages _____ _____

Parents' Education (circle)

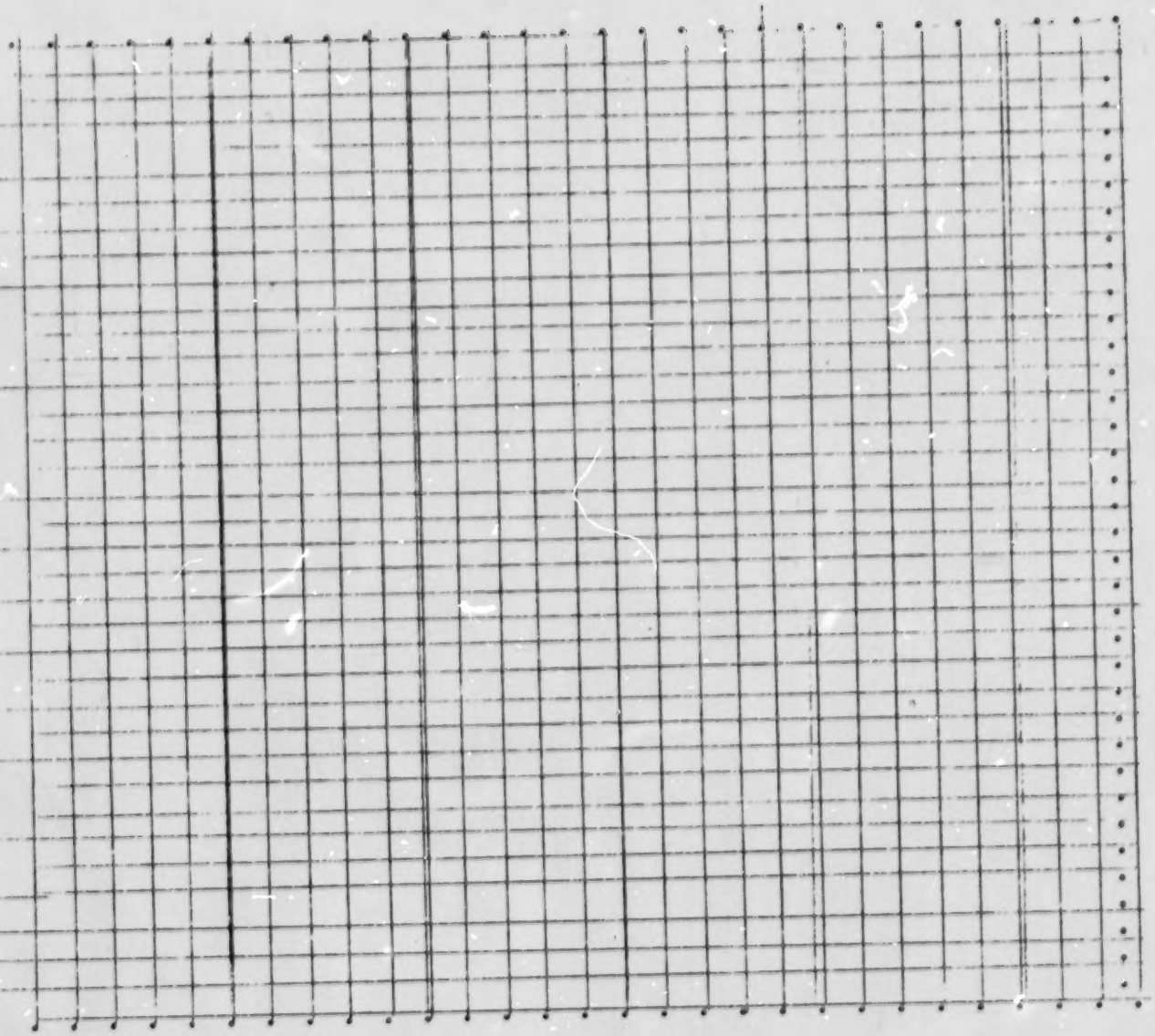
Mother 1 2 3 4 5 6 7 8 9 10 11 12 College 1 2 3 4 5 6 more

Father 1 2 3 4 5 6 7 8 9 10 11 12 College 1 2 3 4 5 6 more

Job description of parents:

Mother

Father


Praise-confirmation
• Simple pr-con
• Elab. pr
• Elab. con
•Reproof-denial
• Simple rep-den
• Elab repr
• Elab den
•Pr-con & rep-den
•Positive answer
•Negative answer
• Neg ans repet
• stat. of cor ans
•Pos & Neg answer
•Positive explanation
•Negative explanation
•Response extension:
• Resp. dev. no clue
• Resp. dev. with clue
• Resp. dev. statement
•Resp. exten. Improv.
• Resp impr., no clue
• Resp impr. with clue
• Resp impr. statement
•Solicit. repit: sev. ans.
• Sev. answ. no clue
• Sev. answ with clue
•Solicit. repet. 1 ans.
• 1 answ no clue
• 1 answ with clue
•Lesson prog. diff. topic
•Misc. feedback
•Phys resp. pos, head
•Phys resp. neg. head
•Phys resp, pos body
•Phys resp, neg, body

Name_____ (Circle one)
Mother Father Guardian Teacher

Your child's name:_____

Please check the following descriptions of your child as he really is, not as you would like him to be. Make one check on each line; for example, if on the first line, he is very friendly, you would mark the space close to "friendly" but if he is unfriendly, you would mark the space close to "hostile". If you feel your child isn't especially either, mark one of the spaces close to the middle.

FRIENDLY	____:____:____:____:____:____:____	HOSTILE
WITHDRAWN	____:____:____:____:____:____:____	ADVENTUROUS
EASYGOING	____:____:____:____:____:____:____	SHORT-TEMPERED
DULL	____:____:____:____:____:____:____	ENTHUSIASTIC
DELIBERATE	____:____:____:____:____:____:____	IMPULSIVE
QUITTING	____:____:____:____:____:____:____	KEEPS AT IT
STUPID	____:____:____:____:____:____:____	SMART
SOCIABLE	____:____:____:____:____:____:____	SHY
TRUSTFUL	____:____:____:____:____:____:____	SUSPICIOUS
MASCULINE	____:____:____:____:____:____:____	FEMININE
VALUABLE	____:____:____:____:____:____:____	WORTHLESS
SLOW	____:____:____:____:____:____:____	FAST
CLEAN	____:____:____:____:____:____:____	DIRTY
RESPONSIVE	____:____:____:____:____:____:____	UNRESPONSIVE
TRUTHFUL	____:____:____:____:____:____:____	UNTRUTHFUL
SENSITIVE	____:____:____:____:____:____:____	TOUGH
OBEDIENT	____:____:____:____:____:____:____	DISOBEDIENT
CAREFUL	____:____:____:____:____:____:____	RECKLESS
STRONG	____:____:____:____:____:____:____	WEAK
UNHAPPY	____:____:____:____:____:____:____	HAPPY
PATIENT	____:____:____:____:____:____:____	IMPATIENT

ANSWER SHEET AND KEY
TESTS OF GENERAL ABILITY - INTER-AMERICAN SERIES
PRESCHOOL LEVEL

GA - P - DE

Name _____ Age _____ Sex _____ School _____

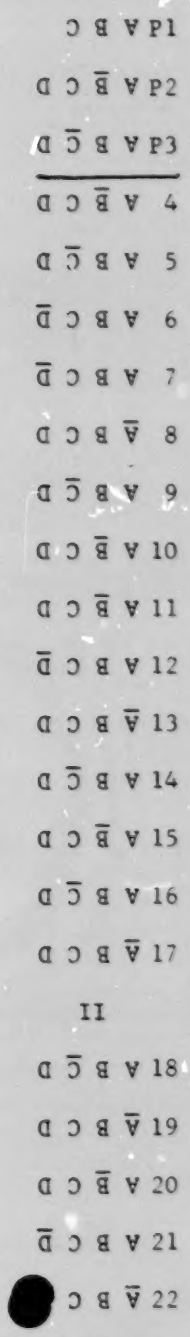
FIRST PERIOD

Date _____

SECOND PERIOD

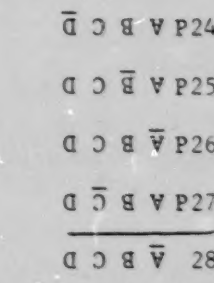
Date _____

I



II

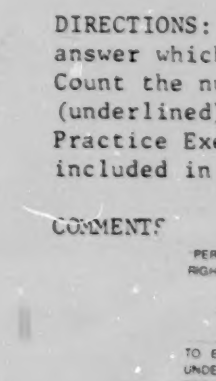
III



IV

V

VI



VII

VIII

DIRECTIONS: Encircle the answer which the child gives. Count the number of right (underlined) answers. Practice Exercises are not included in the score.

COMMENTS

SCORE
Number of right answers

I		V	
II		VI	
VN _____	+	VN _____	= _____
III		VII	
IV		VIII	
Nv _____	+	Nv _____	= _____
_____		_____	
		Total Score	_____
		Percentile	_____

PERMISSION TO REPRODUCE THIS COPYRIGHTED MATERIAL HAS BEEN GRANTED BY
Herschel T. Manuel
TO ERIC AND ORGANIZATIONS OPERATING UNDER AGREEMENTS WITH THE NATIONAL INSTITUTE OF EDUCATION. FURTHER REPRODUCTION OUTSIDE THE ERIC SYSTEM REQUIRES PERMISSION OF THE COPYRIGHT OWNER.

Copyright 1966 by Herschel T. Manuel Printed in USA
Guidance Testing Associates, 6516 Shirley Avenue, Austin, Texas 78752

Modified CATB

Record Booklet

Child's Name_____Tester_____

School_____Experimental-Control (Circle)

Address_____Phone_____Sex_____Race___

Date of Test_____
yr. mo. day

Child's Birthdate_____

Age _____
Add one month if 15 days or more

Age in months_____

Child's Name_____ Proto. #_____

Task Initiation: (Circle proper rating)

1. No initiation. Child sat with hands in lap and watched E. Child sat and looked about the room.

2. Minimal contact: No real involvement is shown - child touched figures but withdrew. Child knocked figure down and immediately withdrew.

3. Initiation but minimal involvement. Child moves figures about randomly but no organization. Child lays all figures down - no systematic play.

4. Initiation - high degree of involvement, organized activity. Child pairs all animals or stands them side by side. Child groups figures and puts them inside barricade. Child puts figures on top of one another.

Curiosity Box

	Activity						Verbalization: Box Related			Other	
Time	Manip. Explor.	Tact. Explor.	Visual Explor.	Other	Move Subj.	Move Box	Time	Quest. &/or Comm.	Fantasy	Quest. &/or Comm.	Fantasy
.50	me	te	ve	other	m-s	m-b	.50	q &/c	fan	q &/c	fan
1.00	me	te	ve	other	m-s	m-	1.00	q/c	fan	q/c	fan
1.50	me	te	ve	other	m-s	m-b	1.50	q/c	fan	q/c	fan
2.00	me	te	ve	other	m-s	m-b	2.00	q/c	fan	q/c	fan
2.50	me	te	ve	other	m-s	m-b	2.50	q/c	fan	q/c	fan
3.00	me	te	ve	other	m-s	m-b	3.00	q/c	fan	q/c	fan
3.50	me	te	ve	other	m-s	m-b	3.50	q/c	fan	q/c	fan
4.00	me	te	ve	other	m-s	m-b	4.00	q/c	fan	q/c	fan
4.50	me	te	ve	other	m-s	m-b	4.50	q/c	fan	q/c	fan
5.00	me	te	ve	other	m-s	m-b	5.00	q/c	fan	q/c	fan

Child's Name:_____

_____

Impulse Control

Fast line (training)

Total Length_____

Total Time_____

Aver. in/.01 min._____

Slow line #1
Time:_____
Length:_____
In. /.01 min._____

Slow line #2
Time:_____
Length:_____
In./.01 min._____

Slow line #3
Time:_____
Length:_____
In./.01 min._____

Child's Name_____ September 1966

Incidental Learning

Incidental Recall	Labeling	Post-familiarization Recall
	T1 Table	
	T2 House	
	T3 Apple	
	1. Dog	
	2. Girl	
	3. Wagon	
	4. Airplane	
	5. Telephone	
	6. Bed	
	7. Shoe	
	8. Car	
	9. Hat	
	10. Boat	
Total		Total

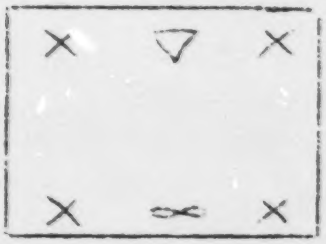
Irrelevant Responses

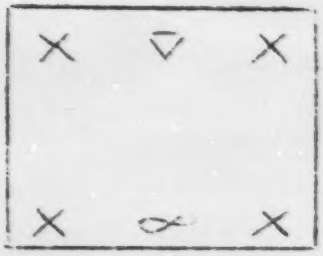
Irrelevant Responses

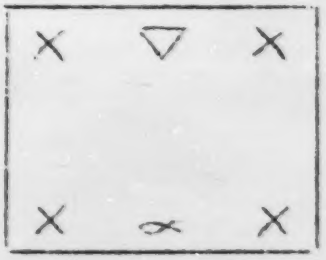
Child's Name_____

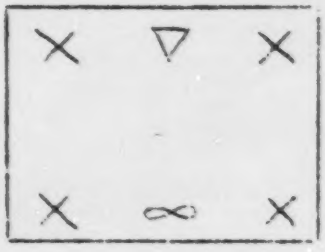
Response Variability

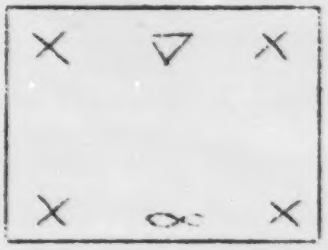
Score (no. of diff. Ways)_____

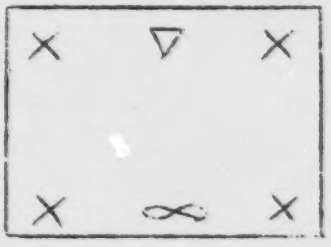


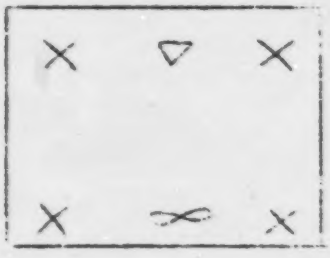


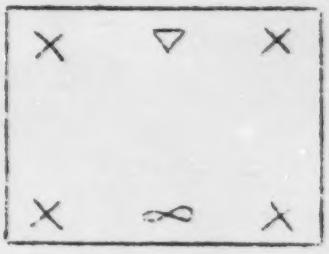












EC = EFT Early Childhood - Embedded Figures Test

Cone Score_____

Puzzle Boards: manipulation board

Revised - August - '67

Activity					Verbalization			
					Board Related		Other	
Time	Manip. Explor.	Other	Move.- Subject	Move.- Boards	Time	Quest. &/or Comment	Fantasy	Quest. &/or Comment	Fantasy
.50	me	other	m-s	m-b	.50	q &/or c	fan	q &/or c	fan
1.00	me	other	m-s	m-b	1.00	q &/or c	fan	q &/or c	fan
1.50	me	other	m-s	m-b	1.50	q &/or c	fan	q &/or c	fan
2.00 Prompt	me	other	m-s	m-b	2.00 Prompt	q &/or c	fan	q &/or c	fan
2.50	me	other	m-s	m-b	2.50	q &/or c	fan	q &/or c	fan
3.00	me	other	m-s	m-b	3.00	q &/or c	fan	q &/or c	fan
3.50	me	other	m-s	m-b	3.50	q &/or c	fan	q &/or c	fan
4.00	me	other	m-s	m-b	4.00	q &/or c	fan	q &/or c	fan
4.50	me	other	m-s	m-b	4.50	q &/or c	fan	q &/or c	fan
5.00	me	other	m-s	m-b	5.00	q &/or c	fan	q &/or c	fan

Early Childhood -- Matching Familiar Figures

#1 Circle

#2 Girl

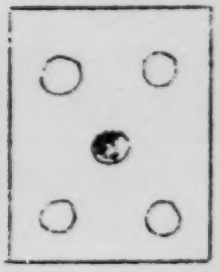
#3 Cat

#4 Boy

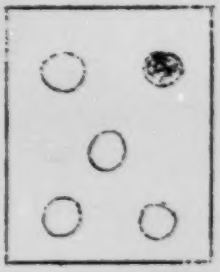
#5 Bunny

Woman - #6 Face

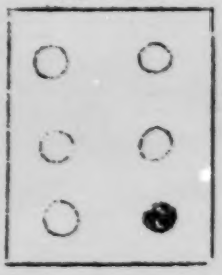
#7 Tree



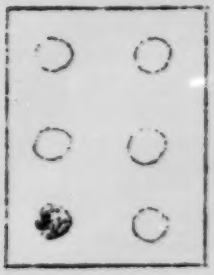
Man - #8 Face



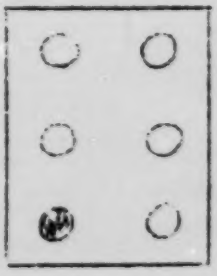
#9 Tractor



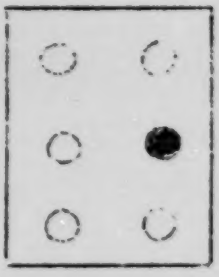
Girl - #10 Face



#11 Plane



Boy - #12 Face



Total Correct _____

Replacement Puzzle: Persistence and Persistence After Distraction

Activity						Verbalization			
						Puzzle or Block Related		Other	
Time	Puzzle - Goal Direct.	Puzzle-non Goal Direct	Other	Prompt	Blocks	Time	Ques. &/or Comm.	Fantasy	Ques. &/or Comm.	Fantasy
.33	pgd	pngd	other	p		.33	q &/or c	fan	q &/or c	fan
.66	pgd	pngd	other	p		.66	q &/or c	fan	q &/or c	fan
1.00	pgd	pngd	other	p		1.00	q &/or c	fan	q &/or c	fan
1.33	pgd	pngd	other	p		1.33	q &/or c	fan	q &/or c	fan
1.66	pgd	pngd	other	p		1.66	q &/or c	fan	q &/or c	fan
2.00	pgd	pngd	other	p		2.00	q &/or c	fan	q &/or c	fan
2.33	pgd	pngd	other		blks	2.33	q &/or c	fan	q &/or c	fan
2.66	pgd	pngd	other		blks	2.66	q &/or c	fan	q &/or c	fan
3.00	pgd	pngd	other		blks	3.00	q &/or c	fan	q &/or c	fan

Tester's Ratings

Child's Name_____ Tester's Name_____ School_____ Date_____

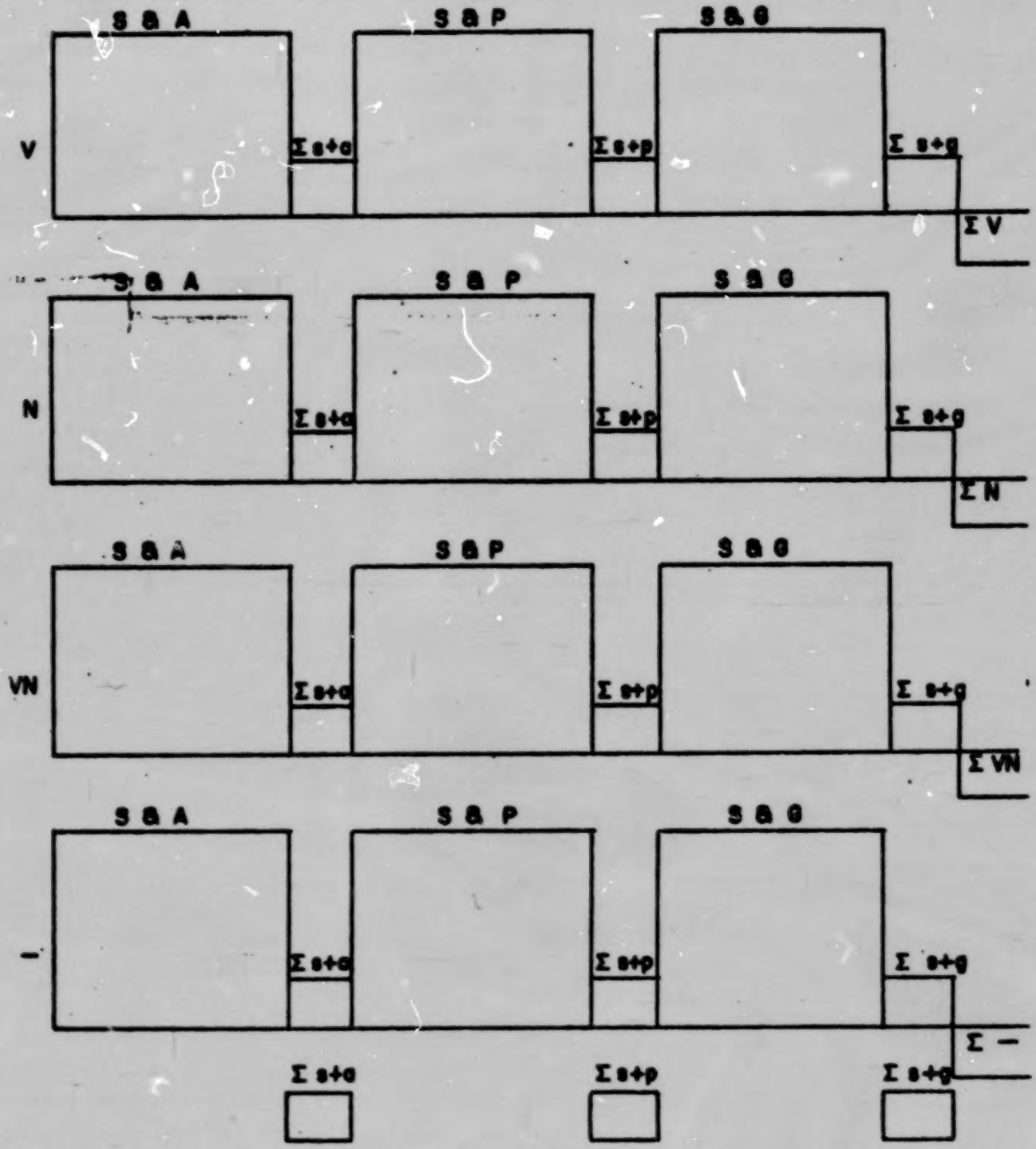
Task Competence Rating	5 Optimal	4 Good	3 Average	2 Fair	1 Poor	
Absorbed by Task						Easily distracted
Persistent						Gives up easily
Eager to continue						Seeks to terminate
Challenged by hard tasks						Prefers only easy tasks
Social Competence Rating						
Socially confident						Shy, reserved, reticent
Comfortable in adult company						Ill at ease
Assured						Anxious about success
Needs minimum of commendation						Needs constant praise and encouragement
Kindergarten Prognosis						
Good conventional kindergarten prognosis						Poor conventional kindergarten prognosis

THE UNIVERSITY OF KANSAS HEAD START EVALUATION & RESEARCH CENTER
Department of Human Development

Interaction --- Master Data Form I

Circle when tallied and enter week of center operation in block below.

3	6	9	12	15	18	21	24	27	30	33	36	39	42	45	min.



Developed under contract with the Office of Economic Opportunity Head Start Research and Evaluation

THE UNIVERSITY OF KANSAS HEAD START EVALUATION & RESEARCH CENTER
Department of Human Development

Verbal and Nonverbal Behavior -- Master Data Form II

Circle when tallied and enter week of center operation in block below.

3	6	9	12	15	18	21	24	27	30	33	36	39	42	45	min.

INITIATION			RESPONSE			
Verbal	Nonverbal	✓	Verbal	Nonverbal	✓	⊘
TT						

Total Verbal Behavior (IV + RV + ✓ + ⊘) =

Total Nonverbal Behavior (IN + RN) =

veloped under contract with the Office of Economic Opportunity Head Start Research and Evaluation

THE UNIVERSITY OF KANSAS HEAD START EVALUATION & RESEARCH CENTER
Department of Human Development

Initiations and Responses -- Master Data Form III

Circle when tallied and enter week of center operation in block below.

3	6	9	12	15	18	21	24	27	30	33	36	39	42	45	min.

INITIATION	RESPONDED TO	NOT RESPONDED TO	
SA	Σ	Σ	Σ SA
SP	Σ	Σ	Σ SP
SG	Σ	Σ	Σ SG
AS	Σ	Σ	Σ AS
PS	Σ	Σ	Σ PS
GS	Σ	Σ	Σ GS
AG	Σ	Σ	Σ AG
PG	Σ	Σ	Σ PG
	Σ R	Σ $\bar{R}$	

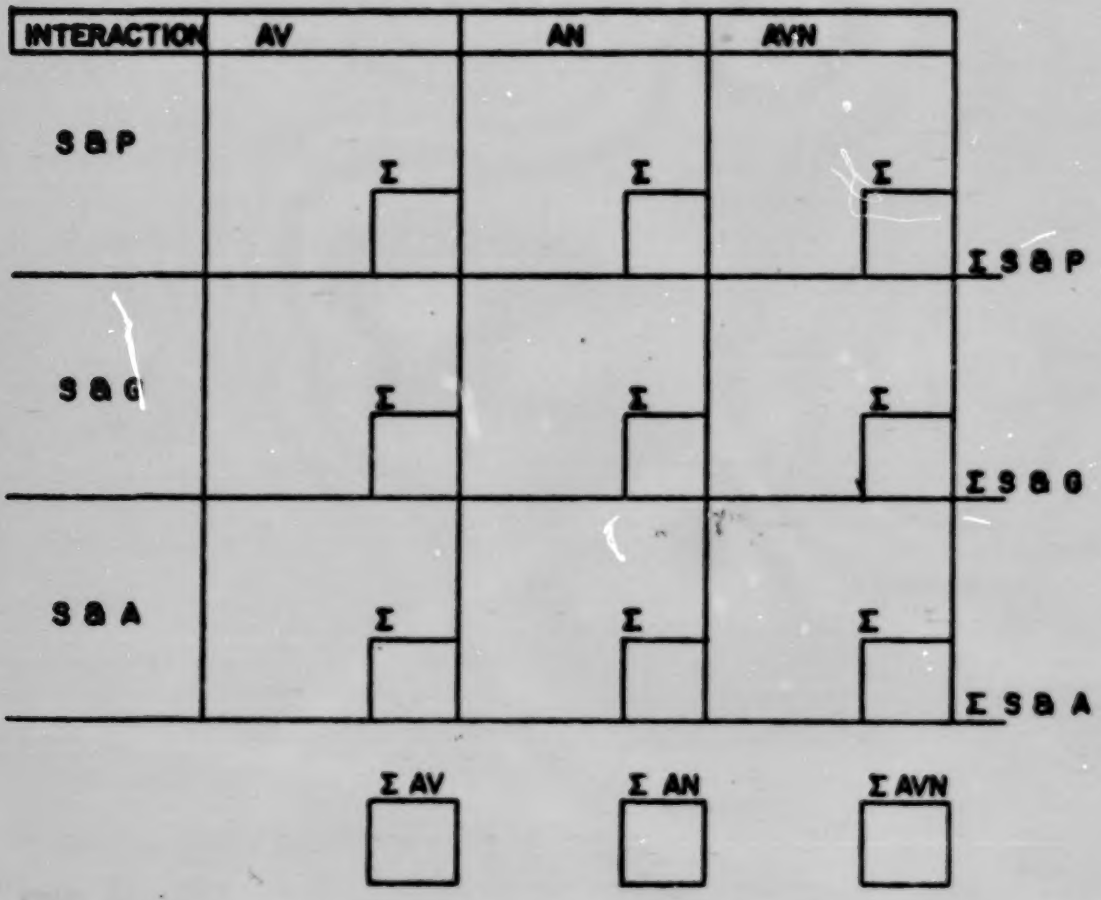
Developed under contract with the Office of Economic Opportunity Head Start Research and Evaluation

THE UNIVERSITY OF KANSAS HEAD START EVALUATION & RESEARCH CENTER
Department of Human Development

Adult Intervention -- Master Data Form IV

Circle when tallied and enter week of center operation in block below.

3	6	9	12	15	18	21	24	27	30	33	36	39	42	45	min



veloped under contract with the Office of Economic Opportunity Head Start Research and Evaluation

Department of Human Development

Interaction with Specified Individuals and Groups
Master Data Form V

Circle last tallied minute

3 6 9 12 15 18 21 24 27 30 33 36 39 42 45 min

By S to Males

Peer	Initiations	%V	%N	%X	Duration	%V	%N	%X
B								
C								
D								
E								
F								
H								
I								
J								
K								
L								
M								
N								
O								
P								
Q								
R								
T								
U								
V								
W								
X								
Y								
Z								
%		%				%		

No. Males Initiated To =

Total Duration with Males Init. To. =

(1)

Department of Human Development

Interaction with Specified Individuals and Groups
Master Data Form V

Circle last tallied minute
3 6 9 12 15 18 21 24 27 30 33 36 39 42 45 min

By S to Females

Peer	Initiations	ΣV	ΣN	ΣX	Duration	ΣV	ΣN	ΣX
B								
C								
D								
E								
F								
H								
I								
J								
K								
L								
M								
N								
O								
P								
Q								
R								
T								
U								
V								
W								
X								
Y								
Z								
Σ		Σ				Σ		

No. Females Initiated To = Total Duration with Females Init. To =

[illegible]
Department of Human Development

Interaction with Specified Individuals and Groups
Master Data Form V

Circle last tallied minute
3 6 9 12 15 18 21 24 27 30 33 36 39 42 45 min

By Males to S

Peer	Initiations	ΣV	ΣN	ΣX	Duration	ΣV	ΣN	ΣX
B								
C,								
D								
E								
F								
H								
I								
J								
K								
L								
M								
N								
O								
P								
Q								
R								
T								
U								
V								
W								
X								
Y								
Z								
Σ		Σ				Σ		

No. Males Initiating to S =

Total Duration with Males Initiating to S =

Interaction with Specified Individuals and Groups
Master Data Form V

Circle last tallied minute

3 6 9 12 15 18 21 24 27 30 33 36 39 42 45 min

By Females to S

Peer	Initiations	ΣV	ΣN	ΣX	Duration	ΣV	ΣN	ΣX
B								
C								
D								
E								
F								
H								
I								
J								
K								
L								
M								
N								
O								
P								
Q								
R								
T								
U								
V								
W								
X								
Y								
Z								
Σ		Σ				Σ		

No. Females Initiating to S =

Total Duration with Females Initiating to S =

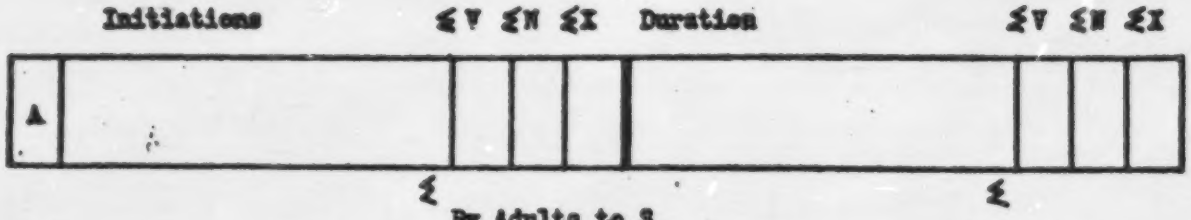
THE UNIVERSITY OF KANSAS HEAD START EVALUATION & RESEARCH CENTER
Department of Human Development

Interaction with Specified Individuals and Groups
Master Data Form V

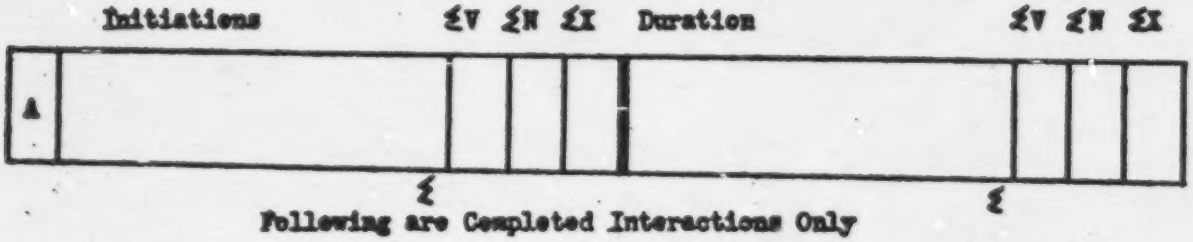
Circle last tallied minute

3 6 9 12 15 18 21 24 27 30 33 36 39 42 45 min

By S to Adults

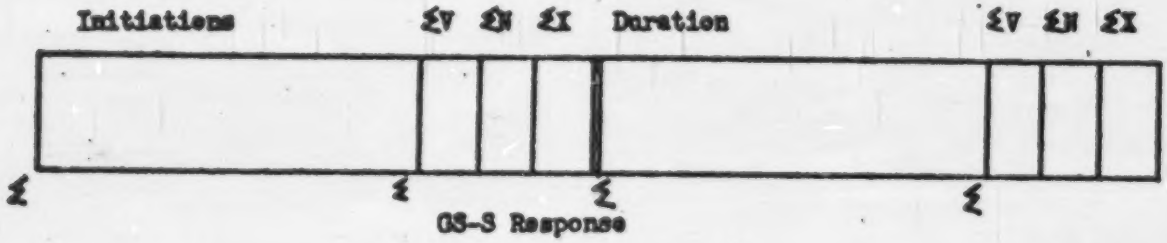


By Adults to S

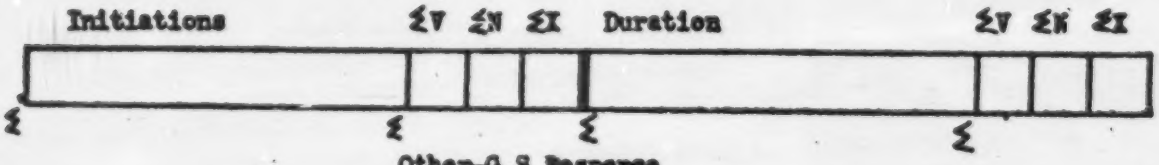


Following are Completed Interactions Only

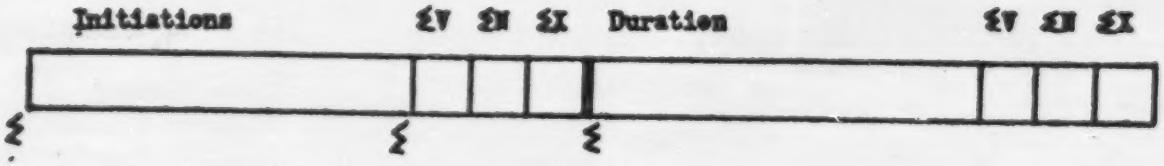
SG-Other Response



GS-S Response



Other-G,S Response



Total Adult Initiations =
Total Adult Duration =
Total No. Males Interacted With =
Total No. Females Interacted With =
Total No. Peers Interacted With

Duration with Males =
Duration with Females =
Duration with Peers =
Overall S Duration =

INVENTORY OF BELIEFS

Form T

This inventory consists of 100 statements which range over a wide variety of topics. As you read each statement, you are asked to indicate quickly your agreement or disagreement with it in terms of the key given on the answer sheet. Pe ple have dfferent reactions to these statements. This is not a test in which there are "right" or "wrong" answers. What is wanted here is your own quick personal reactions. You should be able to finish taking the inventory in 30 minutes or less.

In responding to these statements, you will notice that there is no way provided for indicating a neutral position. It is desired that you indicate a tendency toward either agreement or disagreement even though you may prefer to remain undecided. It is important that you respond to every one of the 100 statements.

Before beginning work, put your name and the name of the center in which you teach and today's date at the top of your answer sheet.

When marking your answer, blacken the letter which corresponds to your feeling about that statement. For example, if for one of the statements you strongly disagreed with or rejected the answer, mark it this way:

A B C ●

You will find the answer sheet at the last page.

Adapted in part by G. G. Stern, Department of Psychology, Syracuse University, from the Inventory of Beliefs copyrighted by the Cooperative Study of Evaluation in General Education of the American Council on Education, 1951.

PERMISSION TO REPRODUCE THIS COPYRIGHTED MATERIAL HAS BEEN GRANTED BY

Paul Dressel

TO ERIC AND ORGANIZATIONS OPERATING UNDER AGREEMENTS WITH THE NATIONAL INSTITUTE OF EDUCATION. FURTHER REPRODUCTION OUTSIDE THE ERIC SYSTEM REQUIRES PERMISSION OF THE COPYRIGHT OWNER.

Name _____ Center _____ Date _____

Key: A. I strongly agree or accept the statement.
B. I tend to agree or accept the statement.
C. I tend to disagree or reject the statement.
D. I strongly disagree or reject the statement.

1. A B C D	2. A B C D	3. A B C D	4. A B C D
5. A B C D	6. A B C D	7. A B C D	8. A B C D
9. A B C D	10. A B C D	11. A B C D	12. A B C D
13. A B C D	14. A B C D	15. A B C D	16. A B C D
17. A B C D	18. A B C D	19. A B C D	20. A B C D
21. A B C D	22. A B C D	23. A B C D	24. A B C D
25. A B C D	26. A B C D	27. A B C D	28. A B C D
29. A B C D	30 A B C D	31. A B C D	32. A B C D
33. A B C D	34. A B C D	35. A B C D	36. A B C D
37. A B C D	38. A B C D	39. A B C D	40. A B C D
41. A B C D	42. A B C D	43. A B C D	44. A B C D
45. A B C D	46. A B C D	47. A B C D	48. A B C D
49. A B C D	50. A B C D	51. A B C D	52. A B C D
53. A B C D	54. A B C D	55. A B C D	56. A B C D
57. A B C D	58. A B C D	59. A B C D	60. A B C D
61. A B C D	62. A B C D	63. A B C D	64. A B C D
65. A B C D	66. A B C D	67. A B C D	68. A B C D
69. A B C D	70. A B C D	71. A B C D	72. A B C D
73. A B C D	74. A B C D	75. A B C D	76. A B C D
77. A B C D	78. A B C D	79. A B C D	80. A B C D
81. A B C D	82. A B C D	83. A B C D	84. A B C D
85. A B C D	86. A B C D	87. A B C D	88. A B C D
89. A B C D	90. A B C D	91. A B C D	92. A B C D
93. A B C D	94. A B C D	95. A B C D	96. A B C D
97. A B C D	98. A B C D	99. A B C D	100. A B C D

1. Literature should not question the basic moral concepts of society.

2. The main thing about good music is lovely melody.

3. Lowering tariffs to admit more foreign goods into this country tends to raise our standard of living.

4. When things seem black, a person should not complain, for it may be God's will.

5. Science is infringing upon religion when it attempts to delve into the origin of life itself.

6. Literature which questions the basic moral concepts of our society is good.

7. In our present society only a wartime economy can provide full employment.

8. A man's conscience is an unreliable guide to right and wrong.

9. No task is too great or too difficult when we know that God is on our side.

10. A work of art which provides only entertainment is useless.

11. A person gets what's coming to him in this life is he doesn't believe in God.

12. Young people today are in general more immoral and irresponsible than young people of previous generations.

13. More playgrounds and fewer strict fathers would eliminate juvenile delinquency.

14. The many different kinds of children in school these days force teachers to make a lot of rules and regulations so that things will run smoothly.

15. Organized labor has done more to further economic progress than business and industry.

16. Poverty can be eliminated.

17. Europeans condemn the United States for being too materialistic, but such criticism is only to cover up their realization that American culture is far superior to their own.

18. The worst danger to real Americanism during the last 50 years has come from foreign ideas and agitators.

19. The scientist who really counts is the one who turns theories into practical use.

20. There is only one real standard in judging a novel or play--that it convey a message of social significance.

21. Nudist colonies are a threat to the moral life of a nation.

22. Allowing more immigrants of all kinds into this country will improve our culture.

23. No world organization should have the right to tell Americans what they can or cannot do.

24. Despite the material advantages of today, family life now is not as wholesome as it used to be.

25. Raising our standard of living requires government regulation of business enterprise.

26. The United States doesn't have to depend on the rest of the world in order to be strong and self-sufficient.

27. Foreigners usually have peculiar and annoying habits.

28. The best assurance of peace is for the United States to have the strongest army, navy, and air force, as well as the most atom and hydrogen bombs.

29. It is only natural and right for each person to think that his family is better than any other.

30. Any man can find a job if he really wants to work.

31. Strikes are caused by the unwillingness of an employer to meet the needs of his employees.

32. American films emphasize sex more than foreign films do.

33. Being a successful wife and mother is more a matter of instinct than of training.

34. The only way to eliminate prejudice is through forceful legislation.

35. A person often has to get mad in order to push others into action.

36. There is only one real standard in judging art works--each to his own taste.

37. Business enterprise, free from government interference, has given us our high standard of living.

38. Art cannot exist for its own sake, independent of social issues.

39. The existence of poverty is an infallible sign of a poorly organized society.

40. Many social problems would be solved if we did not have so many immoral and inferior people.

41. Picket lines ought to be respected and never crossed.

42. You can't do business on friendship: profits are profits, and good intentions are not evidence in a law court.

43. A person has troubles of his own; he can't afford to worry about other people.

44. Books and movies should start dealing with entertaining or uplifting themes instead of the present unpleasant, immoral, or tragic ones.

45. The minds of many youth are being poisoned by bad books.

46. Speak softly, but carry a big stick.

47. Military service should be by choice rather than by conscription.

48. Peace can only be achieved when the United States abandons its attempt to establish military superiority.

49. Honesty, hard work, and trust in God ensure neither material nor spiritual rewards.

50. Ministers, priests and rabbis should not preach about economic and political problems.

51. Each man is on his own in life and must determine his own destiny.

52. The moral good or evil of people has little bearing on any possible destruction of the world by divine intervention.

53. The successful merchant can't allow sentiment to affect his business decisions.

54. No intelligent man today can really believe in God.

55. The United States should make no attempt to exercise control over any world organisation.

56. Religious leaders who preach socialistic ideas are a disgrace to their church.

57. Labor unions don't appreciate all the advantages which business and industries have given them.

58. We should impose a strong censorship on the morality of books and movies.

59. European criticism of the United States is quite justified.

60. If we allow more immigrants into this country, we will lower our standard of culture.

61. Modern paintings look like something dreamed up in a horrible nightmare.

62. The greatest contribution to real Americanism during the last fifty years has come from the intermingling of foreign immigrants and native-born.

63. What a person gets in this life has little to do with whether he believes in God or not.

64. Voting determines whether or not a country is democratic.

65. In our society, a person's first duty is to protect from harm himself and those dear to him.

66. Europeans have no faults as bad as the provincial smugness and intolerance of Americans.

67. Members of so-called racial minorities are no more alike than any other group of American citizens.

68. A belief in divine guidance is of little help in meeting difficulties.

69. Those who can, do; those who can't, teach.

70. Philosophers on the whole act as if they were superior to ordinary people.

71. We would be better off if people would talk less and work more.

72. Most intellectuals would be lost if they had to make a living in the realistic world of business.

73. Science will eventually explain the origin of life.

74. A lot of teachers, these days, have radical ideas which need to be carefully watched.

75. Now that America is the leading country in the world, it's only natural that other countries should try to be like us.

76. Prayer does little toward relieving one's problems.

77. Capital punishment does not serve to lower the crime rate.

78. Foreign films emphasize sex more than American films do.

79. Our rising divorce rate is a sign that we should return to the values which our grandparents held.

80. Pride in craftsmanship and in doing an honest day's work is a rare thing these days.

81. The United States may not have had much experience in international dealings, but it is the only nation to which the world can turn for leadership.

82. A sexual pervert is an insult to humanity and should be punished severely.

83. Labor, since it represents the majority, should be given a greater voice in a democracy than capital.

84. The actions of the United States in world politics clearly demonstrate its unfitness for world leadership.

85. Both beauty and purpose can be found in all modern paintings.

86. There may be a few exceptions, but, in general, members of a racial group tend to be pretty much alike.

87. There are too many people in this world who do nothing but think about the opposite sex.

88. Modern people are superficial and tend to lack the finer qualities of manhood and womanhood.

89. It is more important for a book or movie to be realistic than to be pleasant.

90. Members of religious sects who refuse to salute the flag should be punished for their lack of patriotism.

91. As young people grow up, they ought to get over their radical ideas.

92. The twentieth century has not had leaders with the vision and capacity of the founders of this country.

93. Books on tragic and sordid themes help youth to face the world of reality.

94. There are a lot of things in this world that will never be explained by science.

95. The world will get so bad that some of these times God will destroy it.

96. Other countries don't appreciate as much as they should all the help that America has given them.

97. If a person is honest, works hard, and trusts in God, he will reap material as well as spiritual rewards.

98. The welfare of others is more important than one's own self-interests.

99. Nothing but profit to our country would result from the relaxation of our present strict immigration laws.

100. No censorship on the presumed morality of books and movies can be justified.

Name of Center _____ Room # _____

Teacher's Name _____

STOUT ENVIRONMENTAL OPPORTUNITIES SCALE

I. Child -- Adult Interaction Opportunities

(An "adult" is defined as a person over 15 years of age.)

In this section, you are to rate the center or school according to the normal and regular options realistically available to any given child for forming substantial, on-going relationships with adults, and for regularly observing adults interacting with adults as models.

A. During a typical week at the center, any given child will have regular opportunity for substantial interaction* with:

(Circle one)

1 adult	[1]
2 adults	[2]
3 adults	[3]
More than 3 adults	[4]

*("Substantial interaction with an "adult" means more than an average of two incidences per week involving that adult and that child in child/adult dialogue lasting more than 5 minutes.)

B. The adult(s) with whom any given child has regular opportunity to interact are:

(Circle one)

Male or female	[1]
Male and female	[3]

C. Except in unusual circumstances, the adult(s) with whom any given child regularly (at least daily, under normal conditions) interacts is determined by:

(Circle one)

1. A child is placed wherever there is an opening and stays there unless there is some unusual problem, or until promoted to a higher level. [1]

2. It depends on the child's ability; slow learners work with certain staff members while brighter children work with other staff members. [1]

3. The children are divided by age; he will be placed with his age group. [1]

4. We have only one class -- all children are placed in that class regardless of age or ability. (If there are more than two staff members, and staff specializes in activity areas, then circle #5.) [1]

5. It depends upon the activity; different staff members regularly lead different activities (e.g., one staff member leads most art activities, another leads music, etc.) [2]

6. It depends on group size; some staff members work mainly with large groups, some with small groups, and some with individuals, so it depends upon which group the child is in at the moment. [3]

7. The child has regular opportunity to gravitate toward more than one adult, and a child is allowed to spend most of his time with the adult he seems to prefer. [4]

8. Care is taken to insure that each child regularly interacts with the widest variety of adults possible, even though each child may be primarily assigned to one adult. [5]

9. Care is taken to insure that each child regularly interacts with the widest variety of adults possible, even though a child may form closer relationships with a particular adult chosen by the child. [6]

D. During a typical week:

(Circle one)

1. A child rarely (twice a week) interacts with an adult on a one-to-one basis for more than 15 minutes. ("Rarely interacts" means twice a week or less.) [1]

2. A child sometimes (3 to 5 times per week) interacts with an adult on a one-to-one basis for more than 15 minutes. [2]

3. A child often (more than 5 times per week) interacts with an adult on a one-to-one basis for more than 15 minutes. [3]

E. During a typical week:

(Circle one)

1. A child will rarely (once or less) have opportunity to interact with an adult brought in as a special guest. [1]

2. A child will sometimes (2 or 3 times) have an opportunity to interact with an adult brought in as a special guest. [2]

3. A child will often (4 or more times) have an opportunity to interact with an adult brought in as a special guest. [3]

II. Adult Modeling

A. During a typical day:

(Circle one)

1. A child rarely (once or less) has opportunity to observe an event* of adult-to-adult interaction lasting more than 5 minutes. [1]

2. A child sometimes (2 to 3 times) has opportunity to observe an event* of adult-to-adult interaction lasting more than 5 minutes. [2]

3. A child often (4 or more times) has opportunity to observe an event* of adult-to-adult interaction lasting more than 5 minutes. [3]

*This event may involve children, but must involve two or more adults interacting with each other. (Playground activity is not applicable.)

III. Child to Group

In this section, you are to rate the center according to the normal and regular options realistically available to any given child for developing his social skills in a variety of group situations.

A. During a typical day at the center, a child will normally participate in:

(Circle one)

1. Usually the same group of children, all of approximately the same age (less than two year age range). [1]

2. Usually the same group of children, composed of a wider age range (two to three year age range). [2]

3. Usually the same group of children, composed of an extensive age range (more than three years). [3]

4. A number of different groups depending upon the activity (e.g., an art group, a gardening group,etc.), but all of approximately the same age (less than two year age range). [4]

5. A number of different groups depending upon the activity (e.g., an art group, a gardening group, etc.), but of a wider age range (more than two year age range). [5]

6. A number of different groups deliberately varied so that the child has regular opportunity to participate in large and small groups. [5]

7. A number of different groups deliberately varied so that the child has regular opportunity to participate with children of different ages (i.e., is sometimes the youngest of his group; sometimes the oldest,etc.). [6]

8. A number of different groups deliberately varied so that the child has regular opportunity to participate in both large and small groups, and is the oldest and youngest of a group. [8]

(Circle one)

Is/are group(s) normally sexually integrated?

Yes [3]

No [0]

Is/are group(s) normally composed of both "normal" and handicapped children? (Circle one)
(Children who are merely considered to be "slow learners" are not to be defined as handicapped or developmentally disabled.)

Yes [3]

No [0]

B. The group(s) in which a child participates is normally selected by:

(Circle one)

1. It is almost always the same group, and this group was selected by initial placement. [1]

2. We have only one class of children. [1]

3. It is almost always the same group, but the group was selected by the child after observing each of the groups. [2]

4. There is a variety of groups, each representing a different activity, and the child's activity schedule determines which group he will be in. [3]

5. There is a variety of groups, each representing a different activity, and the child is often allowed to choose his activities. [4]

6. There is a variety of groups, and the center deliberately insures that the child regularly (at least weekly) participates as the oldest of a group, the youngest of a group, etc., or in both large and small groups. [5]

7. There is a variety of groups and the center deliberately insures that the child regularly (at least weekly) participates as oldest and youngest, etc., in both large and small groups. [5]

C. Meals at the center are served in the following manner:

(Circle one)

1. Each child is served individually at a table with same age children. [1]

2. Each child is served individually at a table where children are deliberately seated to provide a wide age range. [2]

3. Meals are served family style with same age children served at the table. [2]

4. Meals are served family style with children deliberately seated to insure a wide age range at each table. [4]

5. Meals are served family style, with children deliberately seated to insure wide age range at each table, and older children are asked to lead orderly table conversation involving every child. [5]

Are children allowed to help plan the meals?

(Circle one)

Yes [3]

No [1]